ABSTRACT
OF A
Clinical Lecture
ON
MALIGNANT TUMOURS:
CERTAIN CONDITIONS, OTHER THAN THOSE CONNECTED WITH THEIR STRUCTURE, WHICH INFLUENCE THEIR CLINICAL HISTORY.

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IT is familiar knowledge that the character of a tumour may, for the most part, be determined by an examination of its structure; and the study of the normal development of elementary tissues has given something like an explanation, through their minute anatomy, of the clinical history of morbid growths.

But although everyone is aware of this relation of the structure of tumours to their life-history in a general way, yet the fact is repeatedly impressed on the attention of surgeons that, granting malignant tumours, as a class, to be connected by certain common characters of structure, these same tumours, in their course, differ widely among themselves, and that this diversity of progress is oftentimes not in the least degree explained by the most thorough investigation of their anatomy. It is therefore obvious—or, to say the least, highly probable—that there are conditions, outside of those connected with their structure, which influence the clinical history of malignant tumours; and of some of the chief of these, as they appear to me, I propose now to speak.

Of the clinical features of malignancy I take of course the following three principal ones: rapidity of growth; affection of glands and of adjacent and other structures; the recurrence of the tumour after the complete removal of all visible portions of it.

There can be little doubt, I think, that the rate of growth of tumours in general, and especially of malignant ones, is largely influenced by the activity of nutrition of the whole body. And thus it is that age becomes such an important circumstance in the course of these growths. As a rule, in the young they advance more rapidly than in the aged. It is true, indeed, that the relative frequency of the various forms of malignant tumour differs at different periods of life. But even here it becomes a question how far the particular form which a malignant tumour may assume is determined or influenced by the rate of nutrition of the structures in which it occurs. But, anyhow, its rate of life is very often strikingly influenced by that of the tissues with which it is associated. The pathologist, guided simply by their structure, places all cancers in one class, and sarcomata in another, but the surgeon knows very well that tumours of the same kind present the widest variation in the changes they undergo. In the young very often the whole course of a cancer or sarcoma is included within a few weeks; in those advanced in life sometimes they endure from month to month, or even from year to year, with little or no apparent change. The age of the subject therefore, or the rate of nutrition of the body, is an important condition, external to the tumour itself, affecting its clinical history.

But the fact that the increase of a malignant tumour, when actually formed, is usually favoured by activity of nutrition in general is not incompatible with the fact that such tumours often first appear in organs, as the breast and uterus, during the decline of their functional activity. The conditions which determine the existence of a disease and those which favour its progress when established are not necessarily identical. And so again the fact that the disease often advances most rapidly as the powers decline is not out of harmony with the preceding one. For here other conditions have to be taken into account, and principally this one, that the rate of increase of the growth itself is usually in proportion to its extent—the larger the mass already formed the more rapidly does it produce new structure. Thus, again, cancer of the uterus or of the mamma is not apt to occur during pregnancy or lactation, but when it does, it is apt, I think—although there are exceptions to this—to grow with unusual rapidity.

If the rate of life of a malignant tumour is influenced by that of the structures with which it is associated, its situation must be a very important condition in its history. But no one can doubt the large extent to which the progress of a malignant tumour is affected by the circumstances in which it lives. Of this there is a frequent and striking illustration. Cancer of the tongue is commonly of the epithelial type, and, as a rule, epithelioma is reckoned to be perhaps the least malignant form of cancer; yet I should say that epithelioma of the tongue is one of the most rapidly destructive of diseases, even among cancers. This is shown sometimes in its rate of growth; far more frequently in its rapid recurrence after the complete removal of all visible portions of it. And I venture to think that this ugly pre-eminence of epithelioma of the tongue among cancers is due to the situation of the growth or the conditions under which it lives. The tongue, especially its mucous membrane, is highly vascular, and this vascularity of course means—is the visible sign of—activity of change. I suppose the natural epithelium of the tongue must pass through the phases of its life with almost singular rapidity. The cells, or the source from which they spring, must be singularly prolific. Then warmth and moisture, I think, play an important part in fostering the mischief. Moisture tends to promote change, and warmth favours development. Movement, too, performs a conspicuous part. Of late years especially the supreme value of rest in reducing morbid action of almost every kind has been recognised; and, conversely, the influence for evil of continual motion must not in this case be overlooked. The pain produced by it tells strikingly of this, and when one thinks of the various functions of the tongue, and of the frequency and extent of the movements they involve, there can be no doubt that motion must be reckoned among the causes which very greatly aggravate the existing mischief. And, lastly, the inevitably frequent irritation to which the surface of the ulcer must be exposed. There is, in the first place, the involuntary and almost incessant contact with the teeth. The part that this plays in the mischief is very frequently forced on the attention. The precise situation of the ulcer, and the shape of it, appear to be very often thus determined. Very often the disease is started by the action of a rugged tooth. Hence the importance, which all surgeons recognise, of getting rid of cracks, fissures, and ulcers, however seemingly trivial when thus induced; of removing without delay any portion of tooth so offending. This caution, too, becomes more urgent as life advances, or during that period of it when cancer of the tongue is most prone to occur. But the teeth are not the only causes of irritation. Food is another, and persons afflicted with this terrible disease are painfully enough impressed by mischief thus provoked. The influence of irritation not only in exasperating existing disease, but even in actually starting it, is shown in the number of instances in which fissures and ulcers of the tongue, to whatever cause they may be due, if long persistent, gradually assume the characters of epithelioma. Thus syphilitic cracks or fissures, when obstinate or neglected, as they often are, will sometimes induce the graver mischief. By the way, if epithelioma of the tongue, for example, is sometimes thus engrafted on cracks, fissures, and ulcers, once simple or innocent, or of some other type, it becomes almost certain that the characters of cancer must be assumed gradually—that there must be a period, perhaps often a long one, of actual transition between innocent and malignant cell-growth. If such a fact in this and other analogous instances be admitted—and, for my part, I do not see how such admission can be reasonably withheld,—it surely must be allowed to be of the first importance in the pathology and in the study of the clinical history of cancer. Again, are we called on to admit, in this case at all events, the occurrence of actual cancer, and this of a most malignant type, to be due simply and solely to long-continued irritation? If so, what is to become of some of the current views on the nature of cancer?

It seems to me, then, that the exceptional malignancy of epithelioma of the tongue, particularly its peculiar proneness to rapid recurrence, which means, I take it, the rapid dissemination of its structures from their original source, may be accounted for by the conditions under which it lives; by the vascularity of the tissue in which it grows,

which means the activity of the changes which are natural there; by the warmth, moisture, and almost incessant movement, and by the irritation from various causes to which it is exposed.

But again, the influence of irritation for evil is shown yet more strikingly in another way; in the treatment of cancers and other malignant tumours by caustics. Some caustics are very powerful agents of destruction, and tumours may be, and often have been, destroyed by their application. This plan of treatment has long been, and is still sometimes, adopted, and in exceptional cases with success sufficient to justify the occasional practice. But it has never been in continuous favour with surgeons in general, because of the very rapid increase of mischief it is so prone to provoke. Where caustics fail to destroy they greatly irritate, and as their destructive action is necessarily a limited one, the difficulty and danger of their employment are due to the fact that while the nearest portions of the tumour may be at once destroyed, the portions beyond escaping destruction are stimulated into excessive activity, and grow into the surrounding structures with an exuberance which, I think, is hardly ever seen in any other case. The most frightful ravages I have ever witnessed in cancer have followed the application of caustics. Of course, it may be said that this is bad surgery, because inappropriate cases have been chosen for this plan of treatment; but although this method may in certain cases be admissible, the instances in which caustics are preferable to any other means for the extirpation of malignant tumours are, I think, comparatively very few; and the fact remains that hitherto far more mischief than good has resulted from their employment. But there are other applications beyond those that are called caustics, which, by irritation, may aggravate mischief, and their action must therefore be included in the conditions which affect the rate of growth of malignant tumours.

And lastly, though not least, among the circumstances of which I speak, must be mentioned the direction of their growth. Whether malignant tumours grow outwardly or inwardly has, I think, a very important influence on their history and result. I shall, perhaps, most clearly illustrate my meaning by taking an example. Certain polypi—as, for instance, some of those from their situation called naso-pharyngeal—have the complete structure of malignant tumours, are, in fact, sarcomata, and yet I think it sometimes happens that when these are cleanly removed they do not, at least for a very long period, recur. Or it may be said that on the whole their thorough removal is less likely to be followed by recurrence than is the case with sarcomatous tumours in general. And I think such growths, too, usually exist for a longer period without infecting glands than do other tumours of similar structure.

Occasionally, epithelioma also grows from the surface outwards, instead of, according to its wont, penetrating the tissues, and thus forms either a cauliflower-like excrescence or a branching papilloma. Some of the villous tumours of the rectum and bladder possess in structure all the characters of epithelioma, and similar outgrowths, although more stunted in form, spring from the skin. In such cases the lymphatic glands are very slow to be involved. They will remain free for a very long period. In these forms, too, the base of the tumour continues to be comparatively narrow and well defined. It often remains as a stalk, and shows little or no disposition to spread into the surrounding textures.

Now these two points in the features of malignancy—increased length of duration without gland affection, and less liability to recurrence after removal—I can only explain by the direction of the growth, that in a polypus it is outwardly and not inwardly among the tissues as in other tumours. And I think the effect of the same influence is seen in the case of other tumours; as, for example, in scirrhus of the mammary region when it recurs after removal. When the recurrent growth sprouts at once from the surface and rapidly grows into an exuberant fungous mass, the adjacent glands are not so soon involved as when the renewed growth is more deeply embedded. I suppose also that when deeply seated malignant tumours are exceptionally circumscribed or well defined, or even encapsuled, there is a prospect of greater length of immunity from recurrence after removal than when they are diffused among or infiltrated into the surrounding tissues. It may be said indeed here that in this case the chances of their complete extirpation are much greater in the first instance than in the second; but, so far as the removal of all visible portions of the tumour is concerned, this is by no means always the fact, and anyhow after all it comes to the same thing. It is only the question of direction of growth from another point of view.

But in reference to this subject a further question arises: Is pressure influential, and, if so, to what extent, in producing the result? That pressure must have influence on the growth of a tumour seems obvious, because, as a rule, a tumour increases most rapidly in the direction of the least resistance. And again, when a tumour bursts through the skin, its growth is, and apparently on that account, often very much more rapid.

Pressure, indeed, may reasonably be supposed to affect the progress and consequences of malignant tumours, but the difference to which I have referred in the clinical features and history of polypi and other outgrowths from those of deeper tumours cannot in this way, I think, be entirely explained.

Sometimes it would seem that the simultaneous growth of the same structure in other parts affects the rate of growth of the original tumour. Thus it is occasionally observed that a tumour or tumours, after steadily increasing for a while, cease to enlarge, and even shrink and wither. But such changes, though not always, are often associated with the increase, perhaps rapid, of similar tumours elsewhere.

THE

Annual Address,

ON

CHRONIC STARVATION,

Delivered before the Harveian Society of London, Jan. 2nd, 1879,

BY GRAILY HEWITT, M.D., F.R.C.P.,

PRESIDENT OF THE SOCIETY, ETC.

GENTLEMEN,—The particular subject to which I propose to invite your attention this evening is one which has for some years occupied my thoughts very much, and concerning which I have something to say which I would fain hope may prove not uninteresting to the members of this Society. It was once wisely said, "There is no new thing under the sun." I do not hope to escape from the imputation that what I have to say is not new. My chief concern is in respect to its truth, and a long experience has so firmly convinced me of the substantial accuracy of the conclusions I have to lay before you that I fear not your judgment in this respect.

Experience has made me acquainted with the fact that there is no such fruitful *source* of disease as insufficiency of food; that there is no more powerful agent in the *prevention* of disease than a good and sufficient dietary; and, further, that there is no more important agent in the *cure* of disease than the administration of proper nourishment. The thought is probably at once passing through your minds, that my experience has only taught me what was known before, and that I am only giving utterance to well-established axioms. But it is my impression that there is still something to be said on this subject, and that it will not be difficult to show that, if these axioms are not novel, they are not very widely, and by no means sufficiently, applied to every-day practice.

The malady to which I purpose to direct your attention is one which results from inadequate recognition of these axioms, and which may be appropriately designated by the term "chronic starvation."

The tendency of modern inquiries and investigation into various pathological processes affecting the human body is to show that, with few exceptions, they are the result in one way or another of defective nourishment or depraved nutrition. And very much attention has been bestowed on the determination of what food is proper or improper for the sustentation of the human frame in order to secure the best means of maintaining it in a state of healthy nutrition. Doctor Diet has, indeed, of late years played a much more important part than was the case formerly, and, while other

therapeutic means have not been disregarded, it has come to be more and more an axiom that drugs are useless if the dietary of the patient is not one adapted to the nourishing of the body. Eleven years ago I delivered an address on "Nutrition the Basis of the Treatment of Disease" at the opening of the medical session at University College. Since that period daily experience has confirmed me in the views expressed in that lecture, and I now allude to it simply for the sake of showing that disease as affected by nutrition is a subject which has for some time occupied my attention.

It will hardly be necessary, therefore, for me to enlarge on the subject of the importance of nutrition in preserving and restoring the health of the body. We may take it that this is admitted, and that it is indisputable.

I wish, however, to bring before your notice the fact that in very many cases the condition of the patient under treatment for this, that, or the other disease, is only to be described accurately by the term "chronic starvation," and, further, that in such cases the cure can only be effected by recognising this fact, and by treating this condition in a persevering manner by suitable remedies.

Cases are common in which the circumstance that the patient is feeble and wanting in strength is obvious to all. Both friends and doctor recognise the fact. But it so frequently happens that, in addition to this feebleness, there is some distress or inconvenience present, and that the practitioner is called upon to prescribe for the latter, that too commonly the general feebleness is an element in the case which receives little or no attention. Such and such an individual is said "not to be strong," but it is comparatively rarely, unless some actual symptom of disease is observed, that this want of strength is brought under the practitioner's attention. A noticeable instance will occur to you at once in regard to the history of cases of tuberculosis, where we find rarely absent a preliminary stage of general feebleness without other marked symptoms. There is every reason for the conclusion that this preliminary stage is one which might be appropriately characterised as one of "chronic starvation," for careful clinical inquiry elicits the fact that, concurrently with the general feebleness, the food taken has been either insufficient in quantity or inferior in quality, owing sometimes to want of appetite, or at other times to the inability to procure proper food.

The processes of life can be prolonged, as we well know, under many very disadvantageous circumstances. The tenacity of life is in many cases remarkable; and the constitution, if originally a good one, is not readily and quickly sapped to its foundation. The weakly infant with difficulty, however, becomes a healthy child. The weakly child is less likely to attain full and healthy development than one whose infancy and childhood have been marked by health and strength. My own observation would lead me to the conclusion that deprivation of the normal quantity of food extending over a long period has far greater effects, and produces more profound disturbance of the frame, than we are accustomed to admit. And I would assert it as a truth susceptible of the widest possible clinical verification that serious results are always likely to follow where for any considerable time the amount of food taken is below the proper standard. This condition is the one to which I apply the term "chronic starvation."

The facts in reference to starvation in the absolute sense of the word—cases in which no food whatever is taken for some days—are well known. Death necessarily follows the complete deprivation of food for a brief period, and the symptoms produced by absolute starvation have been frequently described. But I do not find that in our text-books on medicine there is any sufficiently distinct or explicit account of what happens in the human economy when the system is subjected for a long period to the influence of an insufficient dietary. It is, however, obvious to anyone who considers the subject that there must be more than one kind and degree of starvation, using the word in its proper sense. Complete deprivation of food means death, but the question before us is, what is the result of degrees of starvation of a less extreme character? The human body in a state of health is constantly undergoing destruction and renovation. The destruction is perpetually going on, less rapidly under some circumstances than others, but yet unceasing. The renovation is accomplished *pari passu*, the loss being continually made good by addition of new material. During the period of growth the consumption of material is necessarily greater, and in order that growth may be accompanied by health, the quantity of food required daily is in excess of the destruction of the tissues. These are of course well-known facts. Physiological observers tell us that a healthy man loses as much as 1-280th part of his whole weight in the course of twenty-four hours. Such was the amount of loss in Professor Ranke's experiment upon himself. It is a necessary result that if for many days together, or for many months together, still more if for some years together, the quantity of food taken each day be below the amount of loss sustained by the individual, a condition of chronic starvation must ensue. Allowing for the circumstance that differences exist in different cases in regard to the amount of daily waste, the difference is probably by no means so great as would be imagined; and we find, in fact, that whether at rest or in a state of activity, the amount of waste which daily occurs in connexion with the mere sustentation of the respiratory apparatus is enormous, by far the greater portion of the daily waste from a man in health passing off in the shape of carbonic acid from the lungs. The mere maintenance of the heat of the body every day requires a very considerable expenditure of material. Physiology teaches us that as much as nineteen parts out of twenty of food consumed is devoted to this purpose.

It follows as a necessary consequence of these considerations that during the process of active growth and development the daily waste must be much more than compensated by the daily income of food if health is to be maintained. And it follows, further, that when growth has ceased the current expenditure should be counterbalanced by a sufficiency of material in the shape of food. Let us suppose, for instance, that for the space of one year the average amount of food taken by an adult daily falls short of the amount of daily waste by one-half. At the end of the year, the body, as a whole, will necessarily have deteriorated to an enormous extent. We know what the amount of deterioration would be in the case of a person in health. In round numbers it amounts to this, that if the weight of the body be 112 lb., the loss in twenty-four hours will be about four-tenths of a pound. In cases where the body undergoes progressive and continuous wasting, it is reasonable to suppose that the amount of daily loss becomes less and less as the wasting advances. For instance, by the time 10 lb. had been lost, the daily waste would not be quite so much as four-tenths of a pound. We do not know how far the rapidity of the starvation process affects the quantity of daily loss, but it may well be that the amount of daily waste is proportionately to the weight of the body, also less in individuals subjected to a long-continued starvation dietary than that observed when the individual is in a state of health.

We may take another case. Let it be supposed that for the space of two years the amount of food taken daily is one-fourth only less than that required to compensate daily healthy waste. It will follow that at the end of two years the bodily deterioration will be about the same as in the former case.

Many other analogous instances might be mentioned, the bodily deterioration varying in degree according to the amount of food taken, and the length of time over which the cause was allowed to be in operation.

I have advisedly used the word "deterioration" to designate the effect of the long-continued starvation process. What that deterioration consists in may be gathered from the known phenomena of acute starvation, and from the phenomena presented every day in cases of disease. It is known that the fat first undergoes diminution, next the glandular organs become affected, next the muscles, the heart, the brain, and the cord becoming affected the next in order. These portions of the body become of course diminished in weight. But, *pari passu*, in cases of chronic starvation, another kind of deterioration is witnessed; in process of time the tissues undergo a deterioration in quality as well as in bulk and weight. This is the commencement of disease, and now for the first time pathology steps in, and reveals to us the qualitative changes which the soft parts of the body are undergoing. There is obviously a time in the history of these cases when the tissues are still healthy and normal, but diminished in bulk, and it is of course possible that this preliminary stage may be spread over a considerable period, the individual presenting no tangible sign of disease in the ordinary sense of the word. And the deterioration may of course be arrested at this stage, in consequence of the adoption of a more adequate dietary.

The deterioration-process resulting from insufficient food may, as has been remarked, be spread over a considerable time, and it is often a mere accident that determines the onset of severe, or at all events marked disease. A cold is caught, an extra exertion is taken, or some slight disturbing element is brought into play, and a definite disease is at once ushered in; and it is then, for the first time perhaps, that the case comes under medical notice at all.

It happens that in the course of my experience I have had a very considerable number of cases under notice in which the process of chronic starvation has been very vividly portrayed before me, and my attention has been thus attracted specially to the subject. The cases I allude to are those of young women suffering from symptoms referable to the uterus. Now in a considerable number of such cases there is observed a remarkable disinclination for food. There is in such cases a more or less constant nausea, frequently preventing the patient from taking food in any quantity for a long time together. This nausea is a reflex symptom, and is not, at first at all events, connected with any special disease of the stomach itself. But its presence has this effect, that, sometimes for months, and indeed sometimes for years, the patient takes a very minute portion of food each day. Feebleness and weakness are the natural results of a long continuance of this slow starvation. These cases have given me what has seemed to me most valuable information in regard to the phenomena of chronic starvation; and I have been led to appreciate, by observation of such cases, the disastrous effects which result from a long-continued insufficient supply of food. In the case of young women between the ages of fourteen and twenty, when the growth is, or should be, proceeding at a rapid rate, the amount of material required for the building up of the body is very great, and in these cases an insufficient dietary produces necessarily very marked effects.

Since I first began to understand these cases, and since it became evident that the weakness, the prostration, and the general ill-health observed resulted in the main simply from want of food, evidence confirmatory of the truth of this idea has accumulated very largely, and I have been able to find in the early history of so many of the cases which come under my notice incontestable proof of the existence of a chronic starvation as an initial stage of serious and long-standing disease, that I have been led to give it great attention, and to examine carefully into the previous history of all my cases from the dietary point of view. It is sometimes difficult to obtain information from patients on these points. As a general rule patients seem to have the impression that if they have no appetite they require no food, and, therefore, when the question is put on this subject the reply given is in conformity with this idea. Many patients tell us they take a fair quantity of food, when they only really mean that they take as much as the appetite induces them to take, which is very little, as we find on cross-examination. And thus it happens that in some of the worst cases of chronic starvation the patient is entirely ignorant of the fact that she is really suffering from want of food.

I wish further to remark on those cases of enforced starvation due to uterine irritation causing incessant nausea, that the severity and intensity of the starvation element in such cases was only made known to me by my experience of the very long time required under such circumstances to bring back the body to a state of comparative health. Thus, to give an instance: a case of chronic starvation dependent on uterine nausea of three years' duration required an incessantly careful process of feeding for nearly two years before health was regained. The great quantity of nourishment required to restore the strength, and the long period consumed in so restoring it, were clear proof of the great necessity for it, as well as of the great mischief the previous starvation process had set up. I wish particularly to direct attention to the tedious nature of the process by which in these cases the restoration is effected. Experience has taught me that months or years are required to restore what previous months or years had been engaged in losing. This is a circumstance which is conceivable on *à priori* reasoning and on physiological calculations, but I have become acquainted with the fact clinically.

A general review of disease as effected by chronic starvation is beyond my province, and indeed beyond my capability. I can only offer, as a contribution to this interesting subject, the results of my own experience in regard to the relations subsisting between chronic starvation and the class of diseases falling more particularly under my notice. The class of diseases to which my observations must be limited are—(1) those liable to present themselves at or immediately after the arrival of puberty, including the various menstrual irregularities; and (2) those liable to be observed in connexion with child-bearing, including abortions, post-partum difficulties, and the various disorders more or less associated in women with the active exercise of the faculty of reproduction.

A common instance of chronic starvation is afforded in the case of young girls who, in consequence of neglect at home or want of a sufficiently good diet at school, fall into a condition of weakness and debility at the time the menstrual function is attempting to establish itself. Menstruation is scanty, imperfect, and not unfrequently comes to an end altogether, after appearing for a few months; in some cases it does not appear at all. Having seen a considerable number of such cases of amenorrhœa, I have been forcibly impressed with the almost complete uniformity with which the influence of chronic starvation is to be traced in thus retarding and interrupting the catamenial function. Many parents, living themselves in affluence and surrounded with plenty, seem to consider that girls require little food, and the small quantity of meat allowed in some households is chargeable with the infliction of much after-weakness and ill-health. Schools are—many of them at least—open to the same imputation in regard to the dietary. Bread-and-butter and puddings are often relied upon too exclusively, and the quantity of animal food allowed is insignificant. Two or three years of such insufficiency in the way of dietary is enough to ruin the soundest constitution. The particularly strong ones survive the ordeal and make up in quantity what is deficient in quality; but others, constituting the majority, deteriorate month by month, the appetite becomes less and less, the strength diminishes, while all this time the brain is actively at work. In some few cases a breakdown occurs early enough to prevent extension of the mischief, but in others the mischief progresses insidiously, and it is only when the young woman has left school and resumes her place at home that it is for the first time discovered that she is incapable of exertion either of mind or body, that there is great feebleness, want of appetite—delicacy, in fact, in every sense of the word. Then it is found that the catamenial function is seriously affected, and medical advice is for the first time sought. Concurrently, in such cases, other elements of a causal nature may be traced, such, for instance, as over-exertion in the shape of long walks, which constitute part of the daily programme at many schools, and which, harmless as they may be for girls in robust health and in good condition, produce the worst effects on those who are undergoing the process of chronic starvation. Once for all, I would state my conviction that between the ages of twelve and sixteen or seventeen, during which time girls are either at school or being educated at home, they require at least two good meals of meat daily, and anything short of this appears to me to be insufficient.

Amenorrhœa is not the only menstrual disorder observable in association with chronic starvation, for in a few instances menorrhagia occurs. When this is the case, it will generally be found that the uterus is the seat of more or less decided change.

This leads me to speak of a condition of the uterus which I regard as of the greatest importance as a factor in the production of severe and troublesome disease. It results from many observations which I have been able to make, extending now over a considerable period, that one of the effects produced by chronic starvation is a peculiar softening and relaxation of the tissues of the uterus, whereby the organ loses its normal hard, firm, resisting composition and becomes soft, non-resisting, pliable, and thus physically changed in certain very important particulars. The condition in question is so constantly associated with an imperfectly nourished state of the body generally, that the constant association of the two elements, in cases coming under my notice, first led me to decidedly connect the two as cause and effect, a connexion the knowledge of which has proved most serviceable to me in the treatment of this class of cases. Undue softness of the uterus plays a most important part in the history of flexions of the uterus, and it is my opinion that it constitutes the principal predisposing cause of this troublesome class of diseases. Undue softness of the uterus in single women is, I believe, always associated with defective nutrition. This is the class of cases in which the severe reflex uterine nausea above described is liable to

be observed; nausea, dysmenorrhœa, and undue softness of the uterus are also frequently associated.

Concerning the condition of the uterus in married women who are the subjects of chronic starvation, I would remark that the same softness and undue pliability is liable to be met with as the result of chronic starvation. But pregnancy also has the effect of softening the uterus, or at all events that portion of it which is accessible to the touch. Moreover, after pregnancy is over the softness peculiar to pregnancy is liable to persist for a variable interval. The uterus after childbirth undergoes a process known as involution. This process is singularly disturbed in cases of chronic starvation. It is protracted, delayed, and in other ways seriously affected, in many cases where the general nutrition is in an imperfect state. In other words, in women who are suffering from chronic starvation, we find the uterus is very slow in returning to its original size and weight after the process of parturition is at an end.

Pregnancy is frequently a cause of chronic starvation in consequence of the sometimes long-continued nausea and vomiting attending the first part of the process. It is well known that this evil is occasionally carried to such a length that the patient does actually perish of starvation. In these cases, which are quite analogous to those just now mentioned as occurring in non-pregnant women, the uterine irritation sets up the reflex act, vomiting, and so little nourishment passes into the system that chronic, and sometimes acute, starvation results.

Women of weakly constitution, as it is termed, which is in many cases only another method of expressing the fact that they have at one time or other suffered much from chronic starvation, do, as we know very well, conceive and bear children. Occasionally pregnancy and parturition proceed without particular let or hindrance in such cases. But in the greater number it is not so. Either miscarriages occur or the getting-up from the confinement is not as it should be. And, as a further result, it is observed that in this particular class of cases the occurrence of pregnancy for the first time is the prelude to serious and long-standing uterine disease. Thus a weakly woman marries, becomes pregnant, has a miscarriage, and becomes an invalid from that time forward. Or supposing this first pregnancy comes to an end happily, and the patient afterwards resumes her ordinary life, the powers seem to give way for some reason or other, and invalidism sets in. These are, for the most part, instances of the effects of previous chronic starvation, resulting in a weakening of the uterine structures, the effects of which become intensified by the drain upon the system occurring during lactation, or to the greater expenditure involved in the process of pregnancy, or to the loss of power attendant on a protracted labour or a severe miscarriage. These weakly women are bad subjects for pregnancy; the reserve power is wanting, and the little strength they possess is quickly consumed during the pregnancy, or in connexion with the events which follow thereupon.

Should disorder arise following the pregnancy, the disorder, whatever it may be, obtains a firm hold upon such patients. Ordinary remedies, ordinary tonics, are tried, but the malady takes pretty much its own way, and, unless the real source of the weakness be discovered, and efficient measures taken to restore the lost general power, other medical treatment appears to be useless and unavailing.

In face of this view of the question, the practice of half starving lying-in women for the first few days after labour—a practice which was until lately very much in vogue, and which is still persevered in by not a few nurses, and even medical practitioners, seems very difficult to defend. There can be no doubt that a very meagre dietary at this critical time is capable, in an individual not particularly strong, of turning the balance, and acting as the exciting cause of serious disease. In the course of my practice I have seen in consultation many cases of puerperal fever, and I can truly say that in almost every one of such cases it appeared on inquiry that the food given during the critical three days following the labour was insufficient both in quality and quantity. Women who are really strong may pass through the process of labour well and easily, and may not suffer from deprivation of their ordinary food for two or three days. They have a good reserve of power to fall back upon. But it is not so where, for a year or two previously, the system has undergone progressive weakening—where, in fact, chronic starvation has existed. Then it comes to pass that the blow which falls falls so heavily that the patient is swept away without showing the least capability of resisting its impetus.

I have alluded to puerperal fever in connexion with chronic starvation. The precise relation between the two as cause and effect appears to me to be this—that chronic starvation lowers the vital power, impairs the contractile force of the uterus, and thus promotes absorption of septic material from without.

Puerperal mania is a disorder not very frequently observed, but I do not recollect to have seen any case of this disease in which it was not very clearly evident that the general nutrition of the body was in a very impaired and weakened state. The disease appears to be dependent, in very many cases at all events, on a deficient nourishment of the brain. The "weakness" is chiefly shown in such cases by the cerebral disturbance, but clinical examination of the histories of these cases reveals a previous starvation or very decided indications of great weakening of the body. Only quite recently I saw a case in which the premonitory symptoms of puerperal mania of a most distressing character showed themselves some few months after a particular labour. This patient had been weak and delicate, and inquiry at once elicited the fact that the appetite had been very indifferent, and that she had lost five or six pounds in weight in the few months preceding the occurrence of the symptoms in question.

This short sketch of the relations between chronic starvation and some of the most important of the diseases peculiar to women, will serve to illustrate the points to which I am desirous of calling attention.

It is a fact which no doubt others have observed besides myself, that errors in diagnosis are most frequently due to our overlooking what stares us in the face. A search is made for some symptom or evidence of the existence of some morbid condition of a recondite character, while the simple, plain, and obvious fact is unnoticed. It appears to me that this obvious plain fact of chronic starvation is one of those which are frequently unobserved and unappreciated.

I propose in the next place to say a few words in regard to treatment.

First, I would recall attention to the length of time required to restore the victims of a long course of chronic starvation to strength and health. Abundance of food for a short period is useless in such cases. The amount of food which can be taken and digested each day is small. In a week it does not amount to much. It is only from month to month that we perceive signs that the body is actually gaining in bulk, and in severe cases there may be really no evident gain at all during the first months of treatment. Two or three years are sometimes required to restore the reserve power essential to health.

How is this to be effected? How is the waste to be repaired? According to my experience there is but one method of feeding patients who have been the subjects of chronic starvation likely to be attended with success. The stomach is exceedingly weak, the digestive power small. The stomach will, however, digest a minute quantity of food swallowed frequently, when any attempt to take an ordinary meal would signally fail. The secret is, in fact, to administer several very small meals in the course of the twenty-four hours. The best nourishment is, I believe, strong soup, and this can almost always be taken if the quantity be properly regulated. There is much that might be said on the subject of the dietary; there are many ways, by medicines, by artificial digestive agents and otherwise, of giving the stomach assistance when such is needed. But this primary principle must be kept in view, that the food given must be little and often. The great difficulty we meet with in practice is the lack of appetite. Now I have come to regard absence of appetite as the most decisive indication of the necessity for artificial or medicated feeding. Here nature unfortunately fails in her duty, and the patient has no appetite, and thereupon concludes, erroneously, that no food is required. Hence disaster. This must be explained to the patient. This difficulty only occurs at the outset, however, for in a few days patients take their food as prescribed, and an appetite is gradually created. Once established, little difficulty is encountered in carrying out the proper treatment. In very severe cases it is sometimes necessary to give the patient a nurse to regulate the process of feeding successfully. In the restoration of the appetite, change of scene, change of society, fresh air, and ordinary hygienic regulations must not be forgotten.

It may perhaps be supposed by some that these remarks on

the subject of chronic starvation are superfluous, and that much is being made of a small matter. On the contrary, I feel convinced that want of attention to such apparently simple matters lies at the root of the chronic ill-health with which so many of the population are affected, and accounts for the apparent difficulty of relieving chronic cases of disease. It is certainly the case in regard to the diseases to which women are most liable, but it is in all probability not the less a fundamental axiom in regard to disease in both sexes. The first step in the process of disease is unquestionably the most important; that first step appears to be, in the large proportion of cases, a general nutritional deterioration, such as is certain to be produced where for any length of time the supply of food falls materially below that which is necessary for maintaining a healthy nutritional activity.

ABSTRACT OF

Lectures
ON THE
DIAGNOSIS OF EPILEPSY.

Delivered before the Harveian Society,

BY J. HUGHLINGS JACKSON, M.D., F.R.S., &c.,
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LECTURE I.

THERE are two kinds of classification of diseases—one Empirical or Clinical, for practice; and one Scientific, generally called Theoretical, for the advancement of knowledge. In the scientific or theoretical, so far as is possible, we classify diseases as they are departures from healthy states—as they show abnormalities of structure, function, and nutrition. For example, scientifically I should consider epilepsies on the basis of each being dependent on excessive paroxysmal discharge of some part of the cerebral cortex. This is considering an epilepsy as it is a development of the impressions and movements normally represented in that part, but yet, since the discharge is excessive, as that brutal development of them we call spasm &c.; thus epilepsies are departures from normal states by excess. It is in this kind of study that the researches of Hitzig and Ferrier have enormous value. I would take this opportunity of very strongly urging the importance of Ferrier's investigations of the Sensory Region of the Brain. His conclusions harmonise so well with clinical observation that I think they are of extreme value. It is quite certain that there are paroxysms consisting chiefly of sensory symptoms which pair off with and are strictly analogous to unilaterally beginning convulsions. At any rate, Ferrier has, I think, given a new starting-point for the methodical, the scientific investigation of a most important class of epilepsies.

The above kind of classification is worthless for practical purposes. It would, I think, include migraine.[1] To arrange migraine with ordinary epileptic seizures—loss of consciousness and convulsion,—for practical purposes, would be as absurd as a scientific zoological classification would be for fishermen, hunters, and graziers. Whilst, scientifically, migraine is, I think, to be classed with epilepsies, provisionally at least, as being dependent on a discharging lesion of some part of the cortex cerebri—probably some part in Ferrier's sensory region,—it would be as absurd to classify it along with ordinary cases of epilepsy for practical purposes as to classify whales with quadrupeds (most mammals) for purposes of practical life, because scientifically a whale is a mammal.

We have first to find out that our patient has epileptic seizures—by no means an easy thing when the seizures are slight and transitory. We have to consider cases as they are presented. A patient does not come complaining of a "discharging lesion" of some part of his cerebral cortex, but tells us that he has "had a bad fit," or that he "occasionally loses himself for a moment," and so forth. For practical purposes we require quite a different classification from the scientific one, or, rather, we must have a mere arrangement; we must have types, not definitions, and consider cases, presented, as they approach this or that type. In saying this, I am only repeating what Handfield Jones said long ago, and using the same expressions. As Moxon insists (Guy's Hospital Reports, vol. xv.), we must have a clinical nomenclature.

The clinical or empirical types are only the most frequently occurring cases; there is really no such thing as "genuine" or "real" epilepsy, or "epilepsy proper," except in this arbitrary sense.

The following is the first division in our empirical arrangement of cases of epilepsy:—

1. *Epilepsy proper.*
2. *Epileptiform seizures.*

By epileptiform seizures (second division) I mean such seizures as those which begin by spasm of a hand or foot. There are certain broad distinctions betwixt the two divisions: (1) as to affection of consciousness. The distinction is not that consciousness is lost in one and not in the other, but that consciousness is lost first thing, or very soon, in the paroxysm of epilepsy proper, and late in the epileptiform seizures, or not at all if the discharge is slight and the convulsion limited in range. (2) Convulsion is more nearly universal at once in the former; it begins very locally, one-sidedly, and *becomes* universal in the other—one side is decidedly convulsed before the other is invaded by spasm. (3) The former are rarely caused by local gross organic disease, such as tumour; the latter are often so caused. These are to a great extent but detached statements from different stand-points of what Bright and Wilks have long ago asserted—viz., that epileptic or epileptiform attacks without loss of consciousness point to gross organic disease, such as tumour, of the brain.

I shall pass over the second division of seizures and consider only epilepsy proper — what most nosologists call genuine, or idiopathic, epilepsy.

Taking, then, epilepsy proper, we say, as our definition, or rather type, of it, that it is a paroxysmal loss of consciousness. That is only a statement from the psychical side. We have to add that there is with the loss of consciousness more or less spasm of muscles, including in that expression spasm of muscular coats of vessels and the like, and also certain equivalent effects of central discharges. There are, however, degrees of involvement of consciousness, from confusion of mind to coma. There are also degrees of the accompanying or following spasm, from, for example, slight twitchings of the hands, or that signified by facial pallor, to universal severe convulsion.

We now divide epilepsy proper. The division is most conveniently founded on the degree of spasm. Necessarily, since there are many degrees of spasm, from such as a little twitching of the hands, turning up of the eyes, or facial pallor, to universal and severe convulsion, the division must appear, not only arbitrary, but rough. To start with, we make one which seems very rough indeed. It is into slight and severe, or, using French names, into *le petit mal* and *le grand mal*—freely translatable as little fit and big fit.

I wish only to speak of the first division—the slight seizures. By the expression "severe" is meant those cases in which there is much spasm and often universal convulsion, with tongue-biting. I exclude these cases. To recapitulate briefly: We have excluded one set of cases (epileptiform), and then from epilepsy proper we have excluded the severe seizures. We have only to consider slight cases of epilepsy proper. I must then say what is meant by slight cases, and this will, by implication, be some account of the severe ones excluded from consideration. To prevent a possible misunderstanding, let me remark that the terms "slight" and "severe" refer to quantity of manifestation, not to gravity of the case; the slight seizures are the worst for mind.

The type of our slight cases is sudden and transient loss of consciousness, closely followed or accompanied by but little spasm, and that of small muscles (eyes, face, hands) by pallor of face (spasm of facial arteries), &c.

There may, it is said, be no spasm in some slight seizures. There is, however, a kind of spasm which is not obvious; a

[1] Dr. Latham thinks that the paroxysm of migraine is owing to arterial contraction in the region of the posterior cerebral; Dr. Liveing that there is in the paroxysm a "nerve storm" traversing the optic thalamus and other centres.

vacant look or loss of expression may depend on slight rigidity of the facial muscles. Again, there may be much more spasm than we see. If we look at the face and limbs only, there may appear to be very little spasm, when the respiration is altogether suspended, as is shown by dark lips. On the other hand, there may be some kind of movement which may be mistaken for spasm: writhing of the limbs during suspended respiration, movements of mastication, &c. In slight seizures the patient may or may not fall; he may stop walking, or sway about, or go on walking and reel. Not unfrequently he passes urine.

One reason for dwelling on the slight cases, of which the above is a type, to the exclusion of the severe ones, is that they are practically the most difficult. Those who think the diagnosis of epilepsy easy are thinking, I imagine, only of severe cases, of cases in which occur severe convulsions with tongue-biting. They are not thinking of epileptic vertigo, of such a case as that of a man who suddenly becomes giddy and slightly confused in mind for a few moments. It is very common for epilepsy to be excluded because there is no convulsion, or only very slight local spasm. Trousseau remarks on this. He says, "vertigo is to a certain extent much more characteristic of epilepsy than convulsions." What I suppose him to mean is that *le grand mal* is more likely to be confounded with convulsions in "uræmia," &c., the paroxysms being identical. From the convulsions no one can distinguish between an epileptic, an uræmic, or any sort of eclamptic fit. There is no such thing as a "convulsion of an epileptic character," if it be meant that there is a convulsive paroxysm, characteristic of the epilepsy of nosologists. Certainly we must not say that a convulsion is epileptic because the patient bites his tongue; that is only the sign of a severe fit.

It is well to notice some of the names patients or their friends give to slight seizures:—"Sensations," "turns," "spells," "thinkings," "stupidities," "reveries," "forgetfulness," "faints," "giddiness," "absent," "quiet faints." I was consulted by one epileptic for "dropping off to sleep in the most extraordinary way."

Now the slightest of these so-called sensations very often indeed are the sole seizures for weeks, or months, or years before the severe fits come on.

When slight seizures precede the severer fits the patient may, if left to himself, tell us nothing about the slight ones; he dates his illness from the first severe fit; or if the slight seizures occur mixed up with severer ones, he may not mention them. He does not call them fits, but "sensations," "symptoms," &c. He may say: "I've not had a single fit since I saw you, but I have had many sensations." These sensations are really slight fits, or incipient fits.

A boy, ten years of age, had been subject to fits for two years. At the first they were so slight that his mother said they thought he was "in a deep study"; he used to sit "as if he were thinking." The attack was only of a few seconds' duration, and no alteration of complexion was noticed. Later on in his fits he would turn up his eyes—slight spasm of very small muscles. Later still, there was, besides this, occasional shaking of the body (imitated before me by tremor). I saw one. Whilst sitting the boy blinked his eyes; he did not alter in colour; he then drew in a deep breath, and rapidly all was over. The paroxysm was so sudden and short that I could not make any special investigations. Attacks of epilepsy may be so slight that strangers sitting opposite a patient at dinner may observe nothing, although there is absolute, though transient, loss of consciousness.

Now for cases which do not fully resemble the type, for cases which are sub-typical. This boy lost consciousness, but it is to be insisted upon that there may be epilepsy proper without loss of consciousness. There may be defect of consciousness only. For example, a patient may say that he is not unconscious in his attacks, but add that he does not know where he is, that he hears people talking, but does not know what they say; this shows that he has not *lost* consciousness, but it shows also that he is defectively conscious; in popular language he is confused, becoming so suddenly, and remaining so for a few seconds only.

So our first exception or sub-type is that the patient may be only defectively conscious.

More than this, there may be, according to the patient's report, no affection of consciousness at all. It is well known that a common precursor of affection of consciousness in epilepsy proper (slight or severe fits) is a strange sensation at or near the epigastrium, "in the chest," or "at the heart," some patients may say. Children call it "pain," or "stomach-ache." It is variously described by adults as "sinking," "nausea," and it is frequently said to be accompanied by terror, &c. Now, patients will tell us that for months before they had any affection of consciousness preceded by an epigastric sensation, they occasionally had that sensation alone, and thought little or nothing of it, sometimes thinking it to be owing to disorder of the liver, although it was sudden and transient (paroxysmal). This, then, would be a second sub-type of epilepsy; it would be for a time all the paroxysm. It may be said, your "definition" by type here breaks down utterly for practical purposes. I think I can show that it does not, or if literally it does, we ought and must take the cases as sub-types. It is certain that such a sensation may occur paroxysmally for months without anything further. The fact that it is epileptic in nature is shown by the future of the case: undoubted epileptic affections, attacks with convulsion and tongue-biting, come on, and each paroxysm is preceded by this sensation. What was once all is now the so-called warning of the severe fit. Strictly speaking, it was a rudimentary or incipient fit of epilepsy, and when it becomes what we call a warning, since a severe fit follows, it is the inception of the severe fit. Besides, I should doubt whether consciousness was not affected to some trifling extent. I should doubt whether the patient could, during it, think of anything complex.

Then there are cases of epileptic vertigo. By epileptic vertigo I do not mean any sort of "confusion in the head," but a sensation of movement of external objects, or turning of the body itself. I do not say there is no defect of consciousness in these cases, but it may be very slight and transient. I do not believe that consciousness is entirely unaffected in any sort of giddiness, however caused.

So, then, whilst we take paroxysmal *loss* of consciousness as our type, there are sub-types. There is loss of consciousness, there is defect of consciousness, there is exceedingly slight and transient, practically no, affection of consciousness. The paroxysmalness of the seizure and the sequel show that each is truly epileptic; they may occur at different periods of the same case.

Here a matter of practical importance may be noted. The patient can very often, as he may express it, "resist the fit," "shake off the fit by moving briskly about," &c. He may remark: "I can fight against it." He may say of a threatened attack: "It nearly got the better of me." One of my patients gave as the reason for a fit "getting the better of him," that he was dull after dinner. The friends may stop them by speaking loudly to the patient, or by otherwise roughly disturbing him. This is indirect evidence of the slightness of the seizure.

Premonitory or incipient sensations in epilepsy are for the most part disagreeable; epigastric sensations are often attended by great depression; "fear," "terror," and "horror," are words used by the patient to describe it. But occasionally, to use the patient's expression, the premonitory sensation of an epileptic attack is "pleasing"; several times I have heard a patient say that when he first had his "sensations," and when a decided attack had not told him their unfortunate meaning, he used to "encourage it." Once more we have evidence of how slight a fit may be. This resisting or stopping the fit reminds one of the common proceeding for aborting a convulsion beginning in the hand or foot, by rubbing the part, or by tightening a strap above it. One of my patients told me that a fit beginning in his left foot could be stopped if he could get anyone to tread on his foot.

DEVONSHIRE HOSPITAL, BUXTON.—The Committee of Management of this institution, in their report for 1878, whilst congratulating its friends on the gradually increasing prosperity of the hospital, have to regret the fact that "the cost of every in-patient has reached the largest sum that has ever had to be recorded, and demands the most careful consideration." They have, however, the satisfaction of stating that, notwithstanding the present commercial depression and other unfavourable circumstances, the financial position of the hospital has been maintained, the subscriptions and donations to its funds having been even in excess of those of former years. The average number of patients daily resident in the institution during the year has been 104, and the average number of days in the hospital per patient has been 24.

ABSTRACT
OF THE
Lettsomian Lectures
ON
BRONCHIAL ASTHMA.

Delivered at the Medical Society of London in January, 1879,

BY JOHN C. THOROWGOOD, M.D., F.R.C.P.,
PHYSICIAN TO VICTORIA-PARK HOSPITAL FOR DISEASES OF THE CHEST, PHYSICIAN TO THE WEST LONDON HOSPITAL, AND LECTURER ON MATERIA MEDICA AT MIDDLESEX HOSPITAL.

LECTURE I.

THE subject of Dr. Thorowgood's first lecture was the History, Nature, and Mode of Production of Bronchial Asthma. Reference was made to the views expressed by Dr. Floyer in his treatise on Asthma, the second edition of which bears the date, 1717. Floyer considered asthma to be due to a contracted state of the bronchia, and he compared the motion of the chest and lungs to that of a bellows. "We can move the bellows easily, but suppose a bladder tied within over the nozzle of the bellows, so as to receive the air, and suffer none to get into the cavity of the bellows, it will follow that if no more air can enter than may be contained in the bladder the bellows could be opened but a little way, and would inspire with difficulty. So it appears, in the business of the asthma, inspiration is difficult and laborious because but little air can be admitted into the contracted bronchia. This puts the scapular and intercostal muscles and diaphragm upon a violent endeavour to press in the air and open the lungs, which nisus authors have mistaken, and supposed the pneumonic muscles, especially the diaphragm, to be convulsively affected; but it may easily be apprehended that the diaphragm cannot press the viscera downwards to enlarge the chest if the air cannot be admitted into the lungs to follow its depression and fill the cavity of the breast, and this is the true reason why the diaphragm cannot move in the asthmatic fit." Thus Floyer is not one who lends support to the theory of Wintrich, Bamberger, and Lehmann, that tonic spasm of the diaphragm is the chief cause of asthma; he, like most observers from his time to the present, considered bronchial constriction to be the chief element in causing the dyspnœa. The lecturer avowed himself, like Salter, Trousseau, Watson, Biermer, and others, an upholder of the doctrine of spasm of the bronchial muscle and constriction of the small air-tubes as the essential cause of the asthmatic fit. The sudden way in which the seizure may come on and pass off, and the speedy relief so often obtained by the inhalation of chloroform or the smoke of tobacco, or stramonium-leaves burned under the nostrils, were adduced as reasons for considering the dyspnœa of asthma to be a true primary neurosis, not necessarily due to bronchial hyperæmia or congestion. The opinions of various authorities who have written on asthma were referred to in illustration of the great diversity of opinion that exists among these as to the actual state of the chest and respiration during a fit of asthma.

The lecturer endeavoured to explain the reasons for these contradictory statements, and gave it as his opinion that a depressed state of the diaphragm is not an invariable concomitant of a fit of asthma. The thorax may be powerfully drawn up and fixed in extreme inspiration, and, at the same time, the diaphragm too is drawn up by the contracted state of the lower part of the lungs. A slight rapid movement at the epigastrium shows how the respiration is maintained. The description drawn from life of a case of this kind was detailed. The patient had his first attack of asthma come on quite unexpectedly after an immoderate fit of laughter, the expiratory effort seeming to empty his lungs, and then came on the bronchial spasm. Cases were noticed of patients who described their sensations as if their lungs rose up in the chest; another said he felt as if his air-tubes contracted when his fit came on; a third drew attention to the great retraction of his epigastrium, and all these declared their breath difficulty to be in inspiration. In these cases of severe spasm coming on after expiratory effort in the way of coughing or laughing the dyspnœa was of inspiratory character, the effort of the patient being to inhale, expand his lungs, and so depress his diaphragm. In other cases of asthma the abdomen was prominent, and the chest greatly distended. These cases either were, or soon would become, complicated with emphysema, and were most commonly met with in persons getting on in life; while the intensely spasmodic cases, with inspiratory dyspnœa, were very common in quite young persons, and, not being complicated by much pulmonary emphysema, might get perfectly well, the young often outgrowing their asthma at or about the age of puberty.

Remarks were made on the ingravescent or culminating character of asthma. Beginning with slight wheezing and spasm, the attack gradually passed, as reflex action was powerfully excited, into most severe and alarming apnœa, with great inspiratory effort. Hence the importance of arresting an attack *in limine* by antispasmodic inhalations.

The subject of bronchial hyperæmia and congestion was briefly touched upon towards the close of the lecture, preparatory to the consideration of summer catarrh and hay asthma in the second lecture.

CASE OF LIGATURE OF FEMORAL FOR ELEPHANTIASIS ARABUM.

BY R. DENHAM PINNOCK, M.B. C.M. GLASG.

MRS. B——, a large and stout woman, of florid complexion, aged forty, native of London, married twenty-two years, four children, one dead, two miscarriages, youngest child five years old. Has been twenty-two years in Victoria. Lived for seven years in Cambridge before leaving England. For the last eight years has earned her living as a washerwoman. Her father died, aged fifty, of heart and liver disease; her mother died at the same age of apoplexy; both stout persons. Has had two brothers and five sisters, of whom a brother and sister are living. Two sisters died in infancy, another from dropsy, and the fourth from some unknown cause. One brother died in infancy. Does not remember any of her relatives being affected like herself.

Both lower limbs of the patient were perfectly natural until after the birth of the first child, twenty-one years ago, when the left ankle began to swell. Had no treatment for this. The swelling has been gradually increasing ever since to its present dimensions. Enlargement of right leg began eight years ago at the ankle, and has also been gradually increasing ever since. Ulceration of surface began on left leg at Christmas, 1877, and a fortnight later on the right leg. The enlargement, as the accompanying engraving shows, is most marked from the ankle to the middle of the leg, the calves, knees, and thighs not being very disproportionate to her general bulk. The enlarged portion of each leg is hard and brawny, the skin of a reddish tinge, and covered with thick cuticular exfoliations of a tuberculous character, varying in size from a pea to a walnut. On the left leg these are much more numerous than on the right, and many of them have ulcerated, and are discharging a clear fluid exudation. Patient never suffered pain in either leg till the last time she was carrying a child (five years ago), when the legs ached very much; but this disappeared after the birth of the child. Has never had any impairment of general health. Catamenia regular; lungs healthy; examination of the heart revealed an aortic systolic murmur; liver slightly enlarged; urine pale amber, acid, 1024, copious deposit of amorphous urates, no albumen. Height, 5 ft. 4½ in.; girth of chest, 44 in.; waist, 41 in.; biceps, 16½ in.; forearm, 13½ in. Left side: Thigh, 29 in.; calf, 27½ in.; ankle, 28 in. Right side: Thigh, 28½ in.; calf, 26½ in.; ankle, 26 in.

I was first called in to this case on account of the ulceration of the surface of both legs having become so troublesome as to prevent the woman attending to her household duties. Having for six weeks kept her at rest, during which period various local and constitutional remedies were tried without the slightest benefit, Carnochan's method of treatment occurred to me.

Erichsen gives a table of fifteen cases of ligature of the femoral for elephantiasis with the following results: seven cures; three improved; one improved, and relapse after fourteen months; three deaths; one no benefit.

In the "Biennial Retrospect of Medicine and Surgery" for 1867–68, Dr. George Buchanan, of Glasgow, gives a summary of twelve cases of ligature of the main artery for elephantiasis, in nine of which the femoral vein was tied, with the following results: seven cures; one improved; one death (pyæmia, eighteenth day).

Such results are a quite sufficient warrant for attempting the operation, although in Holmes's "Principles and Practice of Surgery" it is stated that the benefit which follows the operation is in most cases but temporary, so as to render it probable that it always is so, and that the operation ought only to be considered in the light of an experiment, which failing, amputation of the limb is indicated when the enlargement makes the patient's life intolerable.

Dr. Graham, of Richmond, and Mr. Webb, of East Melbourne, having seen the case, both concurred as to the desirability of operating on the left leg. Accordingly, with the assistance of these gentlemen, and Dr. Allen, pathologist to the Melbourne Hospital, on March 7th, at 3 P.M., I ligatured the left femoral at the apex of Scarpa's triangle. The operation was conducted at the patient's residence, under several disadvantages: the room being small and badly lighted, and the table on which the patient lay breaking down under her weight just as the sheath was reached. She informed me also that the catamenia had commenced on the morning of the operation; but I decided to go on, fearing she might withdraw her consent to the operation if it were postponed. She was altogether an hour under chloroform, which Dr. Graham kindly administered; it took fifteen minutes to effect complete insensibility, and fifteen minutes were lost owing to the table breaking down. The incision through the skin measured five inches in length. There were three inches of adipose tissue from the surface to the deep fascia. I used the carbolised catgut ligature, and, after syringing the wound out with Condy's solution (one drachm to a pint), brought the edges together with silver-wire sutures. A strip of lint moistened with the solution was laid over the wound, and over this a layer of cotton-wool, secured by strips of adhesive plaster. Pulse 96. The temperature was 98·6° immediately after the operation, and the surface of the left leg cooler to the hand than that of the right. No arterial pulsation could be felt in either lower limb owing to the thickness of the coverings.

In the days following the operation the temperature rose slightly, averaging 100·5°; the pulse remaining steady at from 80 to 90. On March 10th, the tissues of the left leg were more lax than before, and the ulcerations became coated with dry scabs, under which healing rapidly took place. By March 19th the purulent discharge from the incision, which had been offensive for some days, became sweet, and the temperature was observed to have fallen to the normal. The healing of the wound then went on favourably until April 10th, on which day the temperature rose to 102°. The cause of this was found to be an accumulation of pus not far from the wound, and the evacuation of this abscess was followed by a fall in the temperature to the normal on the next day. By April 23rd (forty-four days after the operation), the wound was entirely healed, and the ulcerated spots were quite sound and clean. The patient was able to be about. The measurements were as follows:—Left side: Thigh, 28¼ in.; calf, 23½ in.; ankle, 22¾ in. Right side: Thigh, 27½ in.; calf, 23 in.; ankle, 19 in.

April 30th.—General health good; some amount of aching in the left leg; no pulsation to be felt in the arteries of either lower limb, in spite of the diminution in bulk. Urine 1020, acid; no albumen; thick mucous sediment. Under the microscope—amorphous urates, phosphate of lime crystals, squamous epithelium, a few pus-cells, and mucus-corpuscles:—Left side: Thigh, 28¼ in.; calf, 24 in.; ankle, 23 in. Right side: Thigh, 26 in.; calf, 23 in.; ankle, 21 in.

May 7th.—General health good; has been up every day since last report, and gets about with the help of a stick; aching in left leg, especially at night. Left side: Thigh, 29 in.; calf, 25 in.; ankle, 24½ in. Right side: Thigh, 28 in.; calf, 24¼ in.; ankle, 21⅞ in.

14th.—General health good. Can get about without the stick. Aching in left leg continues, and now extends up to the hip. To omit the iodide of potassium mixture. Left side: Thigh, 29 in.; calf, 25½ in.; ankle, 25½ in. Right side: Thigh, 29½ in.; calf, 24 in.; ankle, 22½ in.

21st.—General health good, but the aching in the left leg still continues. The enlarged portion of the left leg has a purplish appearance to-day, but is quite warm. There are also some freshly formed tubercles. Left side: Thigh, 29½ in.; calf, 25½ in.; ankle 25½ in. Right side: Thigh, 29½ in.; calf, 24 in.; ankle 22⅞ in. Ordered the following mixture: Tincture of ergot, five drachms; tincture of digitalis, tincture of perchloride of iron, of each two and a half drachms; glycerine, half an ounce; water to eight ounces: two drachms three times daily.

28th.—General health good. Aching in left leg very much diminished, and does not extend above the knee. The tubercles noticed in last report, with a few exceptions, have subsided, and the colour of the skin is quite natural again. She has been getting up as usual every day. Left side: Thigh, 29½ in.; calf, 24 in.; ankle, 23 in. Right side: Thigh, 28½ in.; calf, 24 in.; ankle, 21 in. Urine of a pale-amber colour; sp. gr. 1015; acid; no albumen; chlorides normal; slight flocculent precipitate, showing epithelial scales under microscope.

June 4th.—General health good. Both limbs have ached a good deal at the enlarged parts during the last three nights, but this she attributes, and no doubt correctly, to the weather, which has been cold and frosty. The skin is again pinkish at the seat of enlargement; and there are several fresh tubercles, brown in hue, which, she says, show no tendency to enlarge or ulcerate, although she gets about on her legs a good deal. Left side: Thigh, 29 in.; calf, 23½ in.; ankle, 23⅜ in. Right side: Thigh, 28½ in.; calf, 23½ in.; ankle, 21⅜ in.

11th.—General health good; the aching has been much less this week, and the skin is almost natural again in hue and appearance: tubercles noticed in last report have subsided. Left side: Thigh, 29 in.; calf, 23½ in.; ankle, 23½ in. Right side: Thigh, 28½ in.; calf, 23½ in.; ankle, 21½ in.

From this date I lost sight of my patient, through taking a practice in another part of the colony, but being in Melbourne on the 6th October, nearly four months afterwards, I called on her and found her in good health and moving about at her daily avocations. On the right leg there were a few ulcerations, but on the left none. The measurements were—Left side: Calf, 23½ in.; ankle, 25 in. Right side: Calf, 23½ in.; ankle, 22½ in.

Remarks.—This is, so far as I have been able to ascertain, the first case in which ligature of the main artery has been effected for elephantiasis arabum in this colony. Indeed, I have only met with one or two surgeons here who have encountered the disease. One gentleman connected with the Melbourne Hospital tells me that he has met with three cases in that institution. My patient was an inmate of the hospital about eight years ago, and is probably one of

the three. I have been led to publish my notes of this case partly on account of its rarity, but chiefly with the object of adding another result to the statistics already recorded of Carnochan's plan of treatment. I regret being unable in this case to claim any direct benefit from the operation itself. There was, at the date of the last measurements, an undoubted diminution of size in the limb operated upon, the difference being 4¼ in. in the calf and 3 in. in the ankle. But in the other limb there was also a diminution of 3 in. in the calf and 3½ in. in the ankle, so that the improvement must be due to some other cause than the operation. This cause in my case would appear to be the enforced rest in the horizontal position, which both limbs underwent for seven weeks after the operation, at the end of which period the recorded measurements of both limbs were at their least, showing in the left limb (the one operated upon) a diminution of 4 in. in the calf and 5½ in. in the ankle, and in the right a diminution of 3½ in. in the calf and 7 in. in the ankle. At this date the patient was allowed to get about daily with the aid of a stick, and it will be observed that during the next four weeks the diseased portions gradually enlarged again, the increase in the left limb during this period being 1⅞ in. in the calf and 2½ in. in the ankle, and in the right limb 1 in. in the calf and 3⅞ in. in the ankle. Fresh tubercles also appeared on the left leg. At this time it occurred to me to make an experimental attempt to check the enlargement with ergot and digitalis, having in mind the well-known contractile effect of both these drugs on the bloodvessels. The prescription mentioned in the report of May 21st was accordingly ordered. An immediate improvement took place in both limbs, as the report shows. The medicine was taken regularly for three weeks, at the end of which period (June 11th) there was a diminution in the left leg of 1⅞ in. in both calf and ankle, and in the right half an inch in the calf and 1¼ in. in the ankle. This rather rapid improvement cannot be attributed to the effect of rest, as the patient during the whole three weeks was moving about at her household occupation. It may also be noticed that, directly after commencing to take the ergot and digitalis, the freshly-formed tubercles began to subside, and at the end of three weeks had entirely disappeared. I regret very much that I lost sight of my patient at this date, and that she consequently discontinued her medicine. It would have been interesting to have noted the further progress under this treatment.

Melbourne, Victoria.

ON CHRONIC BRIGHT'S DISEASE, AND ITS ESSENTIAL SYMPTOMS.

BY F. A. MAHOMED, M.D.,
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MUCH has been written about chronic Bright's disease during the last half century, yet it is not unfrequently overlooked during life in cases in which contracted granular kidneys form the essential part of the post-mortem revelations. In truth, chronic Bright's disease is rarely diagnosed till it has become more or less *acute*, and has declared its presence by the occurrence of albumen in the urine; hence one may say that it is rarely diagnosed at all. We wait and watch patiently for this symptom, that the disease may, so to speak, "declare itself," when, forsooth, we ought to do our best to prevent its occurrence, having diagnosed the disease long before. If I venture in these papers to attempt to point out its essential features, it is from a belief that I employ a means which most do not, and that it affords a key to the difficulties of this question. Before proceeding directly to the object in view it is desirable that, for the present purpose at least, we should have some common standard of reference with regard to the general features of the disease itself, and its most important symptoms; and as so many opinions at present prevail on all these topics, it will be necessary briefly to lay down some definitions and explanations concerning them, more especially as the view taken of the clinical aspect of the whole disease depends in great measure upon the opinions held with regard to its pathology. Space will not permit of these subjects being treated at length; indeed, the whole question can only now be dealt with in a temporary manner. Sufficient evidence has, however, I think, been accumulated upon which to base a decided opinion, though perhaps not enough to put the question beyond all dispute.

Such varied conditions are still included under the name of chronic Bright's disease that it requires to be more accurately defined; the term includes too much. The *large white* kidney and the *small red* granular one, are each included under this name, so also are the *mixed* kidneys which partake of the characters of both. Now my chief contention will be that the true red granular kidney is rarely, if ever, diagnosed; the disease which *is* diagnosed, and is confounded with it, is the *mixed* kidney or *yellow granular* kidney. In both the organs are small and contracted; but whereas in the red granular kidney the changes are entirely interstitial, and the tubes are comparatively unaffected, except that they are atrophied by pressure, in the mixed kidney there is much interstitial and also much tubular or epithelial proliferation. The mixed kidney is either the remains of an acute attack—that is, a large white kidney shrinking and becoming granular,—or else it is an acute attack upon the chronic interstitial change; probably either sequence will yield the same result. It is foreign to my purpose on this occasion to enter at length into the pathological anatomy of the kidney; it will be sufficient to sketch in very rough, almost diagrammatic, outlines the disease it is desired to indicate, so that all may be able to recognise the disease without giving their adhesion to any disputed details. My great object is to indicate means by which we can diagnose this red granular kidney, to which I would limit the use of the term chronic Bright's disease. Probably Sir William Gull and Dr. Sutton are working in the right direction, and have made a path along which we may with advantage follow, if we wish to arrive at a just appreciation of the disease, when they call it arterio-capillary fibrosis, and say the kidney may or may not partake of the cardio-vascular changes. Yet it would be wrong to rob the name of Bright of half its glory, and of that which is justly his due, and hence the old name has been adhered to in these papers.

The majority of pathologists, both in England and on the Continent, appear now agreed to divide the changes found in the kidney into two great groups—the tubular or epithelial, and the intertubular or interstitial changes. This division is most convenient both for clinical and pathological purposes. Roughly speaking, we may say that the epithelial changes are acute or subacute, and the interstitial chronic; although there are probably chronic tubular or epithelial changes, and certainly acute interstitial ones. All authorities admit that Bright's disease originates in the blood, and *not* in the kidneys—that, in other words, it is the result of a *blood-poison* of one kind or another. But at this point opinions differ. Some say that the blood-poison spends itself upon the kidneys and produces kidney disease, and that the cardio-vascular changes are consequent to this, and due to the impurities retained in the blood by the disease of the kidneys; while others, and I for one, would say that the blood-poison, of whatever nature it may chance to be, produces certain changes in the cardio-vascular system, at first functional and afterwards organic, by inducing high arterial tension, and subsequently hypertrophy of the heart and thickening of the vessels, and that at the same time it affects not only the kidneys, but also the other excretory organs, which all alike become congested in their efforts to excrete the poison; hence in these organs certain changes occur—interstitial if the disease be chronic, epithelial if acute.

Again, speaking roughly, there are two groups of symptoms which coincide with these pathological conditions: the one dropsy and albuminuria, which goes hand in hand with the epithelial or acute changes; the other the long and persistent pulse, together with the other signs of high arterial tension which accompany the cardio-vascular changes, and are present both in acute and chronic disease. The cardio-vascular phenomena are coexistent with the dropsy and albuminuria in acute disease, *but are present alone, and are the only signs of the chronic condition.* Let me repeat and emphasise this, that the signs of high arterial tension, or over-fulness of the arteries, are the *only pathognomonic signs* of chronic Bright's disease. The dropsy and albuminuria are symptoms of more or less acute and epithelial changes—not, indeed, that they are produced in any way by the epithelial changes, but they accompany them. Whenever they appear—and of course they very frequently do appear in chronic Bright's disease—let us say there has been an exacerbation of the disease, and we have the key to the

whole question. Albuminuria *is not* a symptom of chronic Bright's disease, but the persistent pulse *is*, and it is the only pathognomonic one. If we wish to study disease successfully and to classify it, it is necessary to dogmatise. It is necessary to define and mark out our boundaries, and this is the boundary line in Bright's disease. Albuminuria is present in acute, and absent in chronic disease. Nature, it has been frequently remarked, has no boundaries, but it is necessary for the purposes of science to set up certain types or classes which shall include large groups of facts, and around which we can arrange others, but each group will be connected with its neighbour by intermediate links, thus forming one complete chain. This is true in the study of disease, as in all other sciences.

The disease which is called chronic Bright's disease in these papers may be rigidly, and therefore artificially, defined from the foregoing remarks as follows:—1st. The anatomical effects it essentially produces are the cardio-vascular changes of chronic Bright's disease, and are those so well described by Sir William Gull and Dr. Sutton as arterio-capillary fibrosis. 2nd. The glandular changes are interstitial, and affect alike all the excretory organs—viz., the kidneys, skin, and mucous tracts, especially the gastro-intestinal and bronchial mucous membranes. 3rd. Its symptoms consist essentially in the signs of high arterial tension, taken together with the *absence* of albuminuria.

With the first two definitions I do not propose to concern myself in the present papers, beyond a word in passing; it is the last with which I propose more especially to deal.

As to the first definition, that of the existence of certain cardio-vascular changes, it is to be hoped that almost the last has been heard of discussions as to whether the change in the arterioles is essentially and totally muscular hypertrophy, or whether there is also fibro-hyaline material present. No one appears to deny that there is muscular hypertrophy, nor would anyone detract from the great merit which attaches to Dr. George Johnson's accurate description of it. On the other hand, few who have studied the subject would deny that fibro-hyaline degenerative changes also exist. No doubt it was the fear lest the more important muscular hypertrophy should be overlooked, or not sufficiently dwelt upon, in Sir William Gull's and Dr. Sutton's description, that has led to so much discussion upon the point. Of course, the great importance of the fibro-hyaline change described by them is not so much its occurrence in the vessels, as its extension from them into the tissues of the organs producing a more or less marked fibro-hyaline or fibroid change in the whole body. There can be no doubt that such a change exists; it is one, as I have before remarked,[1] with the grosser aspects of which all observers must be familiar, and which was long ago described by Dr. Handfield Jones, and also by Sir William Jenner; for its more minute and accurate description we are, however, indebted to the account that has been given to us of arterio-capillary fibrosis.

With regard to the second definition, the changes which present themselves in the contracted granular kidney are admitted alike by all pathologists, and it is quite possible to hold the view that the large white kidney tends to pass eventually into the contracted and granular one, without at the same time denying that in many cases the changes may be chronic and intertubular from the first, and that the kidney may altogether escape the large white stage. The similar changes which take place in the mucous membranes to those which occur in the kidney have also been frequently described and insisted on by many observers. While I have myself repeatedly examined the skin and found morbid appearances in the sweat-glands akin to those seen in the kidney, I feel nearly certain that it, like the mucous membranes, undergoes changes the same as those in the kidney; of this further evidence will be adduced on some other occasion.

(To be concluded.)

[1] THE LANCET, Aug. 18th, 1877, Remarks on Arterio-capillary Fibrosis and its Clinical Recognition.

ACCIDENTS AT THE MANCHESTER ROYAL INFIRMARY.—During the week ending January 5th there were no less than twenty-two cases of fracture of the leg and thigh admitted at the Manchester Royal Infirmary; comprising three of the femur; ten of tibia and fibula (simple); two of tibia and fibula (compound); three of tibia; two of fibula; one Pott's fracture; and one fracture of the os calcis.

THE PROPHYLACTIC TREATMENT OF POST-PARTUM HÆMORRHAGE.

BY JOHN KENT SPENDER, M.D. LOND.,
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I AM surprised that more notice has not been taken of Dr. Weir's paper in THE LANCET of August 17th, 1878, on the Prophylactic Treatment of Post-partum Hæmorrhage. Not only is there much to be said on this subject, as Dr. Weir remarks, but it is really astonishing how little it has been worked out. And I use the expression "prophylactic treatment" in a wider sense than that in which it seems to be used by Dr. Weir. During 1873 the medical journals contained an instructive and almost exhaustive discussion on the "anticipation" and treatment of post-partum hæmorrhage, but, with hardly an exception (and that exception is Dr. Edis), the writers restrict their view of "anticipation" to what ought to be done *during the progress of labour*. Is this, then, the whole problem? Is it not a mere fragment of a very wide problem, whose area is coextensive with the whole period of gestation, and even beyond? If we expect a child-bearing patient to lose an unnatural quantity of blood during the third stage of her next labour, certainly it is a most narrow view to imagine that we are doing our whole duty to that patient in merely "anticipating" hæmorrhage while the early stages of labour are going on. When the flooding comes, there is little time to use more than the coarsest mechanical and chemical means for arresting the flow of blood. Questions of vital moment—questions relating to the dynamic resources of the nervous and vascular systems—must be postponed to a "more convenient season," a season which may never arrive if we once lose our readiness and presence of mind. There is small time for thought, and not much for action. Whether we are at the bedside of a stranger or of one whose "constitution" we think we know, the lessons we have learnt from teachers and text-books and our own experience must be applied with vigour and precision; and happy is the man who is able to leave his patient in a few hours beyond the reach of seeming danger. Surely, however, if we are duly impressed with our entire responsibility in this matter, we shall look forward to the emergency, and think how we may mitigate or prevent it. Our inquiries will be directed to the general condition of the patient, to her circumstances of physical and mental health, and to her opportunities for taking sufficient rest and care.

I have before me the first sixteen volumes of the Obstetrical Transactions, and in them I can find no trace of any paper or discussion on this important branch of preventive medicine. An examination of a large number of periodicals fails to discover any evidence that the subject has engaged the attention of our leading obstetric practitioners; and as it is capable of study from a most rational point of view, this omission is really remarkable. For if any other organ showed a disposition to bleed when called to physiological action, should we not spend time and trouble in trying to make out the cause? It is easy to lose ourselves in a dark thicket of words about "debility," "want of tone," and the like; but this is not science, nor can scientific knowledge be gained by such means. Divesting ourselves of all obstetric speciality, we shall best approach the question as the pure physician; and perhaps we shall find that a bleeding womb is only one weak member among many weak members, the vital resistance of which is weakened by deficient hæmatosis and imperfect formative power. The history of gestation may give rise to many medical accidents; the physiological experiment of pregnancy (as Dr. Barnes calls it) searches the body in every part, and tells in plain terms when blood is poor, nerves and nerve-centres are irritable, and excretory glands are blocked or damaged. But at the end of the orderly nine months there is one organ whose strength will be specially tested; and the enormous strain to which it is then submitted will prove or disprove its textural soundness, the integrity of its muscular fibre, and the elasticity of its bloodvessels. And if this healthy balance be seriously disturbed, can we wonder at the phenomenon of post-partum hæmorrhage? The numerical infrequency of this form of hæmorrhage (to a dangerous degree, I mean) has always

appeared to me a matter of congratulation and astonishment when we remember the insanitary conditions in which so many women of the humbler classes live, the toil which they undergo, and their often meagre allowance of proper food.

Within the scope of a comparatively small practice in midwifery, it has been my misfortune to meet with several cases of extreme flooding after the birth of the child, and in persons of a superior social position. I have never lost a case by death, because I have been sufficiently forewarned and forearmed; but the occurrence of the accident several times in the same person has brought the problem vividly home to me—Am I doing all I ought to do to prevent this emergency by leaving it to "nature"?—a polite euphuism for doing nothing. Even for our own sakes we ought to have higher aims. Few things, I imagine, give a medical man such sickening anxiety for weeks beforehand as the knowledge that he has such a battle before him—a battle in which, even if he is the victor, there may be afterwards septicæmia or localised inflammations, to say nothing of protracted weakness, and possibly a shattered nervous system. And yet I do not know if it can be predicated of any woman that she is certain to have a "flooding" at her next labour, if we have no experience of former labours to guide us. Women who are tall, women who are short, stout or thin, pale or red—none can boast an absolute exemption from the casualty. Mental or moral causes may operate at one time and not at another. The weakest-looking persons sometimes get through parturient troubles best; and it must be remembered that the effects of loss of blood can never be measured by coarse standards of quantity—a small loss having a more profound influence in some cases than a far larger loss in others.

In the first place, then, I believe that many cases of post-partum hæmorrhage arise from an ill-nourished uterus. Some years ago Dr. Grailly Hewitt drew attention to "abnormal softness of the nulliparous uterus," and spoke of this condition as a cause of uterine distortion, and of impaired power of locomotion. It may be fairly doubted whether the latter statement has been proved by clinical facts; but the theory affords a reasonable explanation of some otherwise obscure points in uterine pathology. In these cases the uterus is starved because the whole body is; and nerves and muscles and bones waste because of the long inability to take food in proper quantity and quality. Now the uterus is a bag of muscle like the heart, and is liable to some of the frailties and accidents which beset all organs constructed as receptive and expulsive cavities. If mere weakness can disturb the rhythmic action of the heart so as to produce palpitations and faintness, it is only according to analogy that a weak uterus should abort, or be flexed, or be unable to contract efficiently when the mature ovum has been expelled.[1] I do not know whether accurate observation would show that menorrhagia in early life is often the prelude of post-partum hæmorrhage afterwards; but, at all events, the menorrhagic uterus is the type of organ which may become hæmorrhagic when the stress of parturition comes upon it. This consideration should lead to the greatest care in investigating the etiology of menorrhagia, and in the discovery of any local origin or complications.

The proposition which I have attempted to establish suggests the principle of treatment. During pregnancy, a relatively large quantity of lean meat should be consumed, as the special food of all muscular organs. Many are the conflicts which a practitioner may have to wage with a capricious appetite and other proverbial "stomach difficulties"; but the cases are rare in which game or poultry, if not butcher's meat, cannot be taken and be well digested. Eggs are an important article of diet. Every help should be given to the assimilation of food by thorough cookery, deliberate mastication, and a quiet rest after every meal. Further, we may remember that whatever upholds the textural integrity of the uterus promotes the due subinvolution of that organ after childbirth. It is the soft and fatty uterus, Dr. Priestley says, which is imperfectly subinvoluted, and which is, therefore, in the worst possible state for a fresh gestation; and so the cycle of malnutrition is kept up by the events which would elicit the powers of a healthy organ. Once more, by the nutritional methods suggested just now, we get another and capital result—the strengthening of the heart, and a more equal distribution of the blood. It is part of the "common learning" of physiology that pregnancy throws stress upon all the organs of circulation, and sometimes causes in them unusual irritability and weakness.

The next point to be considered is the "positional treatment" of pregnancy. The patient should lie down for three or four hours daily on a couch the foot of which is raised a few inches, so as to lighten the arterial column flowing to the uterus, and proportionately to favour the return of venous blood from it. Static pressure being thus relieved, the uterine sinuses are not so liable to be distended, and passive congestion is retarded. And whether in the pelvis or in the lower limbs, incipient varicose veins and local œdema may be checked at the same time. Still, daily muscular exercise, and always, when possible, in the open air, is of vital consequence in helping the metamorphosis of tissue and the processes of excretion. If there be no tendency to abortion, a pregnant woman should never be allowed to lapse into indolent habits, which promote the deposition of fat, but never make muscles better or stronger. A minor point which may be noticed here is the importance of adequate sleep, but hypnotic medicines should not be administered without a distinct necessity.

Concerning special restorative medicines, I have the greatest confidence in the tincture of perchloride of iron being taken for a long time, especially in the latter months of pregnancy. I do not know that any advantage is gained by combining the iron with ergot or digitalis, or with any so-called hæmostatic remedy. The iron is sufficiently astringent in itself, and what we chiefly desire are its hæmatinic powers. Each dose of the tincture should be accompanied by an equal quantity of glycerine. This covers the harsh taste of the tincture, and rather controls the tendency to constipation. For constipation, in any relative sense of the word, must be carefully guarded against, and for reasons so obvious that I need not here enumerate them.

The medical attendant ought always to satisfy himself as to the healthy state of the urine. I am not discussing now that class of cases in which there is a history of purpura, or an unnatural liability to hæmorrhage of a diathetic kind.

Too frequent pregnancy is a momentous and delicate point connected with this question. If a patient be unable to nurse her child, and conception again occurs before the health has had time to be re-established after a severe flooding at childbirth, the consequences may be very disastrous. It is better to be quite candid to both the parties concerned, and to advise earnestly a year's freedom from the burden and peril of gestation. In this interval something may be done; perhaps nutritional tonics of the cod-liver oil class may be tolerated; and, whenever it is practicable, there should be a summer stay of a few weeks by the sea (with bathing) or in an elevated hill country. Most vigilantly should we watch for the beginnings of pulmonary consumption, or of any disease which may be developed out of prolonged anæmia. And every rule of hygiene ought to be conscientiously obeyed.[2]

By following some few or more of these details I have accomplished a little in the prophylactic treatment of post-partum hæmorrhage. For instance, in the case of a lady whom I attended in six confinements between May, 1860, and October, 1869, the difference between the first and last occasions was very great. In 1860 the flooding was more appalling than anything I have ever seen or heard of, and life was only just saved. The same accident was severe on two other occasions, but in 1869 it had ceased to be remarkable. An abdominal, or so-called obstetric belt is undoubtedly an assistance when worn during the two or three last months of pregnancy.

I cannot close without entering a protest against the views contained in the final paragraphs of Dr. Weir's paper. He seems to deny the propriety of a parturient woman under any circumstances inhaling chloroform. It is an old subject, this of the administration of anæsthetics during labour, and it is impossible to discuss it fully here. But the idea of using the forceps or of turning without allowing the poor sufferer the boon of partial anæsthesia, seems to me inhuman and a backward step in scientific practice. To the operator himself the blessing is beyond all price. Conceding that the use of chloroform may have been sometimes abused, and that in ordinary cases of midwifery it is not needed, and

[1] The oblique passage of the sinuses through the uterine walls was long ago pointed out by Dr. Braxton Hicks, who showed that when the placenta is removed the feeble wall gives way, and severe loss results, unless the uterus contracts quite firmly.

[2] Strict alcoholic temperance must always be enforced. So long ago as 1861 Virchow referred to syphilitic degeneration of the decidua as a possible origin of hæmorrhage.

might be even injurious, I cannot imagine why a safe anæsthetic may not be inhaled so far as to lessen the sensibility to exhausting and unnecessary pain. A period of comparative rest being obtained, and the irritability of the nervous system being allayed, the uterine contractions will probably return with fresh vigour. Administered according to definite principles and in a careful manner, Dr. Sansom says that chloroform is the best of all anæsthetics in midwifery practice.[3] Except in obstetric operations, small doses of chloroform, and only the early stages of its influence, are necessary; and when administered in this mode and to this extent, it is innocuous, and even exalts circulating power. In accordance with a recommendation given by Dr. Richardson long ago, Dr. Sansom uses as his anæsthetic mixture one part of chloroform and two of absolute alcohol. Dr. Charles Kidd's papers in early volumes of the Obstetrical Transactions are of similar tenor, and resemble the teaching of Dr. Tyler Smith at an earlier date still. I remember writing in 1862 to Dr. Skinner, of Liverpool, requesting his opinion on the safety of the inhalation of chloroform when we have reason to fear post-partum hæmorrhage, and he favoured me with a valuable private letter in which he expressed an opinion that no untoward effect was likely to be produced by the moderate use of this anæsthetic. Finally, I would direct attention to the translation of a paper by Dr. Courty, of Montpelier, in the *Medical Times and Gazette* of Nov. 23rd, 1878, in which some forcible arguments are adduced in favour of the employment of anæsthetics during natural labour; and he actually mentions the comparative absence of hæmorrhage as a point which strikingly tells on the side of his thesis.

Bath.

NOTES ON THE TREATMENT OF SKIN DISEASES.

BY J. B. BRADBURY, M.D.,

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I.—THE TREATMENT OF PSORIASIS.

THERE are few physicians who have not met with cases of psoriasis which have been most rebellious to treatment. During the last few years several such cases have come under my notice, and I venture to place before the profession the methods of treatment I have found most useful in these obstinate forms of the disease. At one time I treated all cases of psoriasis with Fowler's solution, and an ointment containing in each ounce of lard six grains each of the bisulphuret and red oxide of mercury and two minims of creasote. The success attending this mode of treatment was most marked. Four or five cases have, however, of late been under my care in which this method of treatment has signally failed.

One of these cases was that of a young girl, fourteen years of age, who had never menstruated, and whose body was almost covered with the eruption, the patches being especially well developed over the elbows, knees, and abdomen. In this case all the ordinary remedies were tried, including red ointment, alkaline and bran baths, Plummer's pills, arsenic alone in ordinary doses and combined with iodide of potassium, liquor potassæ, tincture of iron, tar capsules, Donovan's solution, the biniodide of mercury, tar and carbolic acid ointments, &c. There was, however, little or no improvement, although the remedies were fairly tried for a sufficient length of time to test their efficacy. The girl was well nourished, otherwise I should have given her cod-liver oil. What benefited the patient most was a mixture containing eight minims of liquor arsenicalis and ten grains of potassium sulphate, in an ounce of water, given thrice daily; and subsequently a mixture containing sulphate of iron and sulphate of magnesia. The eruption did not completely disappear till the catamenia had been for a long time established.

Another case was that of a gardener, between thirty and forty years of age, whose arms, legs, abdomen, and forehead were covered with white scales. He had had one previous attack. He was rather thin, but in other respects in good health. In this case arsenic, in any shape and in any dose, was useless; so were all outward applications except the alkaline and bran baths. He was ultimately cured by taking drachm doses of citrate of potash twice daily, and five grains of Plummer's pill every other night, and leaving off all stimulants. There was no syphilitic history.

A third case was that of a publican, aged forty, a private patient. In this case the eruption speedily disappeared under the influence of arsenic and the red ointment and a non-stimulating diet. The patient could not be induced, however, to discontinue altogether alcoholic drinks, in consequence of his business. The result was a return of the eruption and the appearance of albumen in his urine. Arsenic alone now failed to remove the disease, and so did phosphorus, but a combination of arsenic, carbonate of ammonia, and acetate of potash, quickly removed every trace of the malady, although the patient took a considerable quantity of wine and spirits. The patient had never had gout.

A fourth case is still under observation—viz., that of a young girl, aged nine, whose head, face, legs, arms, and trunk have been affected. No internal or external treatment benefited this girl, except the ointment of chrysophanic acid (thirty grains to an ounce of lard). In a few days this removed the eruption without any internal remedies. The disease has, however, a great tendency to return, but speedily disappears under the influence of the ointment.

Cambridge.

[3] Obstet. Trans., vol. x., p. 121.

CASE OF HÆMORRHAGE INTO THE WALLS OF THE STOMACH, FOLLOWED BY SELF-DIGESTION OF THE ORGAN.

BY T. W. McDOWALL, M.D.,

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THE drawing which accompanies this short note may be of interest, as it represents a combination of two somewhat rare pathological occurrences—namely, extensive hæmorrhage between the coats of the stomach, and subsequent self-digestion of the organ.

The history is not interesting or important. S. S——, aged forty, married, was admitted to this asylum in December 1866, in a state of mania, and in feeble health. It appeared from the medical certificate that she had various delusions, and suffered from confusion of ideas and impairment of memory. She was depressed, irritable, and occasionally excited. She believed herself to be under the influence of machinery, which prevented her doing any work. A complete change had occurred in her habits; she had lost all interest in her domestic duties, and in the comfort of her husband and children, &c. The attack had continued three months, and was not her first; from it she never recovered. To the time of her death she laboured under a variety of delusions, the most striking of which was that her lungs were full of evil spirits. These she was constantly trying to expel by violent coughing. She worked in the laundry for several years; in fact, until her health broke down. About the middle of 1875 it was observed that she was losing flesh. Phthisis at last became unmistakably developed, and she passed from bad to worse, till Sept. 15th, 1876, when she died. During her illness nothing occurred to impart special interest to it.

Necropsy, thirty-two hours after death.—The brain presented no feature of interest; there was no atheroma of the vessels. The muscular substance of the heart was somewhat pale and soft; valves competent. The right lung was full of miliary tubercle in all stages, with two or three small cavities near the apex. The left pleural cavity contained several pints of semi-purulent fluid. The serous membrane was thickened throughout, and studded with minute tubercular deposits. The lung itself, as is usual in such cases, was compressed towards the root, and quite solid.

As to the abdominal organs, it is necessary to notice only the stomach and intestines. The colour of the latter at once showed that they contained blood. In removing the liver it was seen that there was at least one rent in the stomach towards the lesser curvature. The viscus was removed with great care, and opened along the greater

curvature. The contents consisted of a few ounces of sago mixed with small clots of blood, the whole partially digested. When the organ was floated in water, it was seen that in

PYLORIC END

the neighbourhood of the lesser curvature, reaching quite up to the pylorus, and, as represented in the drawing, some distance down each wall, a large extravasation of blood had occurred between the mucous and muscular coats. Over the whole of this area, and at a few spots where much smaller extravasations had occurred, the mucous coat had entirely disappeared. Where the process of self-digestion had advanced furthest, the muscular coat was gone, and in these places the whole thickness of the wall had been dissolved. Through one of these openings the contents of the stomach touched a small portion of the under surface of the liver; at that spot the same process had begun, and had extended to the depth of a quarter of an inch. No further morbid appearance was observed in the stomach. The intestines were examined from end to end. There was no trace of ulceration or congestion. The contents were small in quantity, and consisted chiefly in altered blood. The colon was nearly empty. The rectum contained ordinary fæces, but no blood.

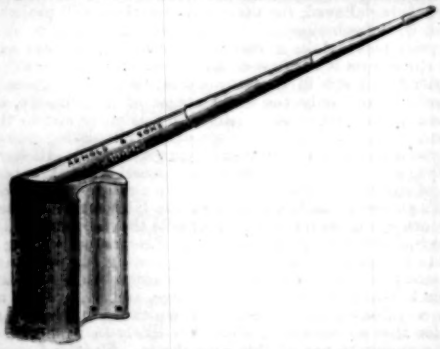
Although long a matter of dispute, it may now be considered settled that self-digestion of the stomach is a post-mortem change. The case under consideration certainly supports that view, for the slightest muscular contraction either of the viscus or of the abdominal walls would certainly have caused at least partial escape of the contents.

In recording this instance, it is quite unnecessary for me to go into the general question of spontaneous solution of the stomach. Within the last few years several exhaustive papers have appeared, but so far as I have been able to examine the literature of the subject, I have not found a case similar to this—one in which the process attacked the tissues after the vitality of the mucous membrane had been reduced by extensive hæmorrhage on its under surface.

THE VAPORIFER.

BY W. L. SHEPARD, M.R.C.S., &C.,
FORMERLY TUTOR AT ST. BARTHOLOMEW'S HOSPITAL.

AN apparatus which can be used either as a bronchitis kettle, an inhaler, or a portable vapour-bath; that cannot get out of order, or burn even if allowed to boil dry; that can be refilled without moving from the fire, or stopping the emission of steam, is, I think, likely to be useful to the profession, especially at this season. Such an apparatus, which I propose calling the "Vaporifer," has been made for me by Messrs. Arnold and Sons, of West Smithfield. The woodcut explains sufficiently its very simple construction. It has no bottom, and when in use stands in any ordinary saucepan, so that, should it boil dry, the worst that can happen will be the spoiling of a sixpenny saucepan, easily replaced. The top of the apparatus is closed, and on its inner surface, enclosing the orifice of the steampipe, is a movable circular chamber, having a perforated bottom, on which any drugs can be placed when it is wished to medicate the vapour. The crescent-shaped front permits of the saucepan in which it stands being refilled without moving



from the fire, and if *boiling* water be used the steam is generated continuously. By removing part of the steampipe, and affixing the mouthpiece, a very handy and efficient inhaler is formed. Placed over a gas-stove or spirit-lamp, it can be used as a portable vapour-bath. A not unimportant advantage is its trifling cost, as Messrs. Arnold inform me it can be sold for less than either of the three apparatus it replaces. Lastly, it packs in a neat compact case, and may be had of the nearest chemist's, to the great saving of the family teakettle, which, hurriedly pressed into the service, displays a great deal of useless zeal by vigorously blowing its steam up the chimney, and generally comes to an untimely end by having its bottom burnt out.

Euston-road.

A Mirror OF HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

A SERIES OF CASES OF FRACTURE OF THE SKULL.

(Under the care of Mr. HULKE.)

WE commence this week a series of interesting cases of fracture of the skull, under the care of Mr. Hulke. Every case will be found to present points of extreme interest. Some show recovery after presumed fracture of the base, and others illustrate the presence of high temperature where necroscopy failed to discover any coarse signs of inflammation, but only *bruising* of the bone-tissue in all.

CASE 1. *Fracture of the side wall of skull; much bruising of under-surface of brain; very high temperature.*—A laundress, aged fifty-five, a large heavy woman, was admitted into Bird ward at 12.45 P.M., on Dec. 18th, 1870, in a half-conscious state—not noticing what was passing around her, and not speaking unless spoken to, when she replied incoherently. Her pupils were contracted and rigid, and the right eyelids were ecchymosed. Mucous râles were audible in the chest. Pulse 76; temperature in armpit 98·6° F.; respiration 32 per minute. She was said to have fallen down an area the evening before. At 5 P.M. the pulse had risen in frequency to 92, and it was very weak and intermittent. At 6.15 P.M. the pulse had become still more frequent, the temperature had greatly risen (104·4°), and the respiration was 50. The head, after being shaved, was covered with a large ice-bag; and a calomel purge was given. At 9.15 the temperature was lower (102·8°); pulse 128; respiration 44. As she had not passed water, and the bladder was full, the catheter was used.

Dec. 19th.—In the early morning she was slightly more conscious, and appeared to recognise her friends. The

pulse, temperature, and breathing during the day were as follows :—

	Pulse.	Temperature.	Respiration.
9 A.M.	132	102·4°	48
1.30 P.M.	120	102·8°	46
6 P.M.	160	104·2°	52
8.40 P.M.	140	104°	58
10 P.M.	156	103·8°	60

Death took place at 6 A.M. on the following day (20th), about fifty-seven hours after the time of the accident.

Necropsy.—The head only was examined. The right temple, eyelids and cheeks, and lower ocular conjunctiva, exhibited ecchymoses. There was found on this side a fracture crossing the greater wing of the sphenoid into the spheno-maxillary fissure. The anterior lip of the fracture was slightly depressed. Corresponding to this, the dura mater was torn, and the surface of the brain was indented. A large clot in the arachnoid space overlaid the upper and lateral surfaces of this hemisphere of the brain. When the brain had been lifted out of the skull the under surface of the front and middle lobe of the left cerebral hemisphere was found to be bruised and softened ; and here too, in the arachnoid space, was a thin clot coating the under and lateral surface of the hemisphere. The arachnoid surface of the dura mater of the vault of the skull was dotted with minute dark spots of the size of a pin's head—capillary hæmorrhages. Under the lesser wing of the sphenoid, in the sphenoidal fissure, was another small clot.

GUY'S HOSPITAL.

CHRONIC DISEASE OF THE KNEE-JOINT, WITH CHEST SYMPTOMS ; AMPUTATION AND RECOVERY, WITH LOSS OF ALL SIGNS OF PULMONARY TROUBLE.

(Under the care of Mr. BRYANT.)

THE following report is continued from page 11, and should be read in connexion with the case recorded there. For the subjoined notes we are indebted to Mr. A. W. Green.

G. H——, a carpenter, aged twenty-nine, was admitted into Job ward on October 24th, 1873. He had enjoyed good health up to the time he was seventeen years old ; he then noticed a swelling of the left cervical glands. He consulted surgeons in his neighbourhood, who prescribed for him without relief. The swelling then was the size of an orange. Two years after he went to the Royal Free Hospital, where he was ordered cod-liver oil and iron. The next week he went to St. Bartholomew's as an out-patient, but obtained no relief, although attending for three months. After five or six years the swelling in the left side of his neck disappeared, and the glands on the right side began to swell. These again went away in three months, and the glands in the right axilla became enlarged. This soon went, and the patient then noticed little knots between his ribs, which also vanished, but during the time of the disappearance of the last swelling he noticed that when getting up in the morning his right knee was painful and sore, and he was obliged to lift it out of bed, but after walking it got strong again. In January, 1873, he slipped on the pavement and fell, striking his knee against the kerb-stone. It swelled a little, but he was able to walk home. He rested, and the swelling went down, but the knee remained sore and stiff. After a day's work, and at the end of March, it got stiffer and worse, so that he could do no work. He was then admitted into the Glasgow Infirmary, where blisters were applied and a splint put on ; he was afterwards sent to a "Home," and whilst there he had a fall on his bad knee, and got no sleep for a month, during which he remained in bed. He again went back to the infirmary, using a crutch, and worse than ever. The actual cautery was applied to the knee, under chloroform, and he was sent again to the "Home," where he stopped a month. He then came to London, and was admitted to Guy's Hospital.

The patient was a delicate-looking man, with bloodshot eyes. His cervical glands were enlarged and hard ; his right knee was much swollen, and the veins over it were full, but he had no pain, and it was not red. The pain got worse at night. The case was diagnosed as one of pulpy disease of the joint.

On the 26th he was unable to sleep during the night for great pain which came on, and the following day the knee became more swollen and tender, and fluctuation was noticed under the patella. Pulse 96 ; temperature 99·4°. The knee continued hot, painful, and tender, and sleep was almost abolished for some days.

On October 30th the chest was examined by the house-physician, who found slight dulness in right apex anteriorly, with prolonged harsh expiration. The vocal fremitus was increased. The physical signs at the left apex were similar, but less marked. Minute crepitation was heard at the end of inspiration near the right base. There was probably tubercular deposit in the lungs. An injection of morphia failed to produce sleep, and one grain of opium was also taken without effect.

On November 3rd there was tenderness over the right great trochanter, which was very prominent, owing to emaciation of the buttock. The right knee was more comfortable and less tender on pressure. There was marked fluctuation above the joint, and tenderness over the patella.

On the 4th, considering the character of the patient's health, and with the belief that local suppuration would lead to general tuberculosis, Mr. Bryant determined to amputate. This was done by Esmarch's bloodless plan, three inches above the joint, long anterior and short posterior flaps being made. A great deal of pus escaped from above the joint ; the joint surface was quite smooth, and the cartilage was not ulcerated, but was shedding, the synovial membrane being gelatinous. Silk sutures were used, a napkin put round the stump, and strapping over it. Pulse 110 ; temperature 101°. He seemed very comfortable after the operation, having no sickness, and slept well during the following night.

On the 8th the stump was dressed. There was primary union in the middle, but a little sloughing at the sides. The sutures in front were removed, and the stump was washed with a solution of permanganate of potash. The patient was without pain, and said he could feel his foot as well as when it was on. Pulse 112 ; temperature 102°.

On the 13th, the left corner of the stump was tender and the flaps were a little farther apart, the space being filled up with fibrinous material, and granulations were showing at the edges. The stump was kept raised, and dressed with permanganate and iodine solutions.

Four days later the primary union in the middle had given way, and the right corner seemed to be healing best. There was some little burrowing, and there was a pale-red margin to the flaps. He had for some few days fits of sweating during the night, but his appetite was good. Pulse 110 ; temperature 100·3°.

On the 19th the back splint was removed, and a piece of perforated zinc substituted. The edges of the flaps were very tender, and there was some foul discharge. Next day the disease in the right lung was found to be increasing. Minute crepitation could be heard very distinctly at the apex in front.

On the 26th the edges had become much separated. He had pain at night, and slept but little although an injection had been given to him.

On Dec. 11th the patient still complained of much pain, particularly in the night. The wound was looking flabby and unhealthy, with a deep sinus leading down into the wound, secreting fetid-smelling pus. Pulse 144 ; temperature 103·4°.

On Jan. 8th, 1874, an incision was made in the upper part of the stump, and about half a pint of thick, black, offensive pus and blood let out. The discharge continued the next day, and there seemed to be suppuration under the fascia all up the front of his thigh.

On the 20th there was still a good deal of pus coming away ; the edges of the flaps were healing a little.

On Feb. 9th the stump was not looking nearly so well, the anterior flap being very much retracted, about an inch of bone being exposed ; there were some granulations on the outer side of wound. The flaps were kept drawn together by strapping so as to cover the bone.

A fortnight later the upper flap was very much retracted, and more bone was exposed.

From this time there was considerable improvement in the stump, and on March 5th the wound seemed to have a tendency to heal. On the 14th he was able to get up for a little. There was a small abscess on the front of the thigh about four inches from the end of the stump. On the 30th he was looking rather flushed. He did not get much sleep, and had a good deal of pain in his leg, especially towards the evening. A piece of dead bone had been taken away, and there was a good deal of burrowing.

On April 9th the abscess was opened again, and a great deal of blood was lost, but the man was easier afterwards.

On May 7th the discharge still continued, and the pain was so severe that the morphia injection frequently failed to give ease. There was a spontaneous formation of skin on the outer surface of the wound, about two inches from the edge.

On the 9th eight pieces of skin were grafted, but it was thought they got washed off. Two other pieces were grafted on the 18th, and two others on the 21st, three of which took. The discharge continued about the same, but the pain was worse, and only relieved by morphia injection.

On the 28th the wound was still healing from below, but an ulcer had formed on the new skin, the discharge from which smelt badly. It was washed with permanganate, and dressed with water.

On June 3rd two pieces of skin were grafted, one of which took. The man's general health was good, and the wound looked very healthy. A week later several grafts were made, and again on the 11th and 18th, some of which took and grew.

On the 25th the patient had continued in occasional pain, which prevented him from sleeping, but he was able to go to Margate on this date, and walked to the cab with the aid of crutches. The end of the stump was matted over with growing particles of skin, and the fold of skin over the upper part of stump had certainly been brought over the granulating surface more than was the case a month before. The chest symptoms had quite disappeared.

Dr. Steel saw this man at Margate at the end of the month, when the stump had healed, and he was well in all respects.

QUEEN'S HOSPITAL, BIRMINGHAM.

CASE OF CONTRACTED PELVIS; INDUCTION OF PREMATURE LABOUR BY HYPODERMIC INJECTION OF PILOCARPINE; DELIVERY BY FORCEPS; SUCCESSFUL RESULT TO MOTHER AND CHILD.

(Under the care of Mr. JOHN CLAY.)

WE are indebted to Mr. J. W. Moore, M.R.C.S., obstetric assistant, for the following notes of this interesting case, which is, we believe, the first case recorded in this country of the employment of pilocarpine for inducing premature labour.

M. A. G—— was sent to the hospital by Mr. Colgreave, of Bambury, on Nov. 4th, who stated that the patient had considerable spinal and pelvic deformities, and was seven months advanced in pregnancy.

She was twenty-eight years of age, married, a primipara, and well nourished. She had a well-marked angular curvature, involving principally the dorsal vertebræ. She believed herself to be in the thirtieth week of pregnancy. The left extremity was three-quarters of an inch shorter than the right. The external conjugate pelvic diameter measures 6¼ in., the diagonal conjugate 3¾ in., the estimated diameter of the true conjugate being 3¼ in. Other measurements showed that there was no lateral deviation. The uterus was low in the pelvis, the cervix measuring about ⅔ in. in length. Fœtal heart heard a little to the left of umbilicus.

Mr. Clay demonstrated the various measurements before his class, and, in a lecture which he gave upon the case, stated that the pelvis was contracted in the antero-posterior diameter, and that it was almost impossible for a child to be born alive at term. So he proposed to induce premature labour; and, after describing the various means available, determined to try the hypodermic injection of pilocarpine. He said that this drug was on its trial, and, as the patient was in good health and excellent spirits, he thought it advisable to put the remedy to a fair test. The first injection was made on Nov. 16th at 10.30 A.M. A solution of the nitrate of pilocarpine was prepared, five grains of the salt to a drachm of distilled water, and four minims of the solution, equal to one-third of a grain, or twenty-three milligrammes, were used.

In order to record the results of the injection at intervals of a minute, Messrs. Spofforth, Wood, and Osborn assisted Mr. Moore to mark the variations in the pulse, temperature, skin, and pupils respectively, under the superintendence of Mr. Clay. Eight injections were given altogether, at 10.30 A.M. and 4.30 P.M. daily. The following synopsis shows the effects of the first injection at intervals of a minute, and as the phenomena manifested after each administration were almost uniformly the same, the symptoms detailed will equally apply to all the observations, with a few differences which are afterwards appended.

Before the injection the pulse was 92; temperature 97°; respiration 18 per minute. At end of second minute there was flushing of face, ears, and neck; pulse 120; respiration 26. Third minute: salivation; eyes suffused and pupils slightly dilated; pulse 130; respiration 30; skin moist. Fourth minute: profuse perspiration; saliva running from mouth; pulse 110; respiration 28. Fifth minute: pulse 72; pallor. Sixth minute: pulse 62; temperature 97·8°; coldness of extremities; sight hazy; respiration 20. Seventh minute: pulse 60, less soft and full. Eighth minute: pulse 72; retching; sickness; respiration 20. Tenth minute: pulse 72; temperature 97·6°; depression; sight still hazy; pupils normal; a desire to micturate. Twelfth minute: pulse 80; temperature 97·6°; vomiting; perspiration diminished. Fifteenth minute: pulse 80; temperature 97·4°; vomiting; sight normal. Twentieth minute: pulse 100; temperature 97·6°; skin moist. Thirtieth minute: pulse 96; temperature 97·6°; skin moist; saliva still running from mouth. At the end of an hour: feels sleepy; pulse 108; temperature 98°; respiration 16. At the end of two hours and a half: temperature 99°; pulse 112; skin dry; the effects of the drug, excepting depression, seem to have passed off.

At the end of six minutes after the first injection the pulse diminished in frequency to 62, and was scarcely perceptible. The collapse seemed so great that it was feared she would not rally. In about two minutes, however, reaction set in. This collapse was not present after subsequent injections. After the first two administrations the pulse was not so much affected; thus after the fifth injection it remained at 120 until five minutes afterwards, when it was 110, and at the eighth minute returned to 120. The pupils were not affected after the first dose. The variations in temperature were trifling, there being, on an average, a rise of ⅓° to ½° at the end of six minutes, followed by a fall of ½° to ¾°. At the third and subsequent injections sickness came on at the third or fourth minute. The patient never had frontal headache or giddiness, but always had great depression.

There appeared a greater tolerance of the remedy after each injection, and as the patient had no pains at the end of the second day, the dose was increased to five-twelfths of a grain (about twenty-nine milligrammes).

A vaginal examination was not made until forty-eight hours after the first injection, when a slight bloody and watery discharge was observed, indicating probably an escape of liquor amnii. The cervix was fully developed, the os freely admitting the finger, but it was very rigid. The head presented, and the membranes were believed to be entire; if they had given way it must have been at some distance from the cervix. On the fourth day of the proceedings, the os was dilated to the size of a halfpenny, but still very rigid, and pointing backwards. The vertex had engaged in the brim, and the pains occurred at intervals of fifteen minutes. A Barnes's dilator was then introduced, followed in six hours by a full-sized one, and at 9 A.M. the os was fully dilated. The pains were now frequent and strong, but the head was arrested. Consequently chloroform was administered, and the forceps applied, delivery being effected with some difficulty. A drachm of ergot was afterwards administered, the hæmorrhage being slight. Mother and child are making satisfactory progress.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Effects of extreme Congestion of the Brain.—Chronic Pneumonia.—Some observed relations between Diphtheria and Milk.—Garget.

THE annual general meeting of this Society was held on the 7th inst.; Dr. C. Murchison, President, in the chair. The ballot for the election of officers and Council for the ensuing year was taken, and the usual reports and votes of thanks read and carried. But the chief feature of the evening was the communication by Dr. Buchanan from Mr. W. H. Power suggestive of a connexion between diphtheria and milk-contamination from a disease in the cow known as

"garget." The nature of this affection was discussed in a paper by Mr. Smee, and was referred for investigation and report to a special committee nominated by the President.

Dr. COUPLAND exhibited a specimen of a Brain showing the effects of extreme Congestion. It was from a young woman twenty-one years of age, who died from acute bronchitis after a week's stay in hospital. On the third day after admission she fell into a drowsy, semi-comatose condition, from which she never rallied, the temperature of the body rising to 105·6° before death. Examination of the brain revealed intense and symmetrical punctiform hæmorrhage in the white matter of the cerebral hemispheres, without any softening, and apart from any local thrombosis in the larger veins or sinuses. The microscope showed no obvious disease of the vessels. Such an outcome of mechanical hyperæmia dependent on obstructed pulmonary circulation was very rare. — Dr. GREENHOW added that the absence of motor paralysis was a remarkable feature in the case.

Dr. COUPLAND also exhibited a specimen of Chronic Pneumonia. It was an instance of slaty induration, involving the whole of the lower lobe of the right lung, as well as the posterior and lower third of the upper lobe, the consolidation being tough, smooth, and of a slate-grey colour. A gangrenous cavity of old date occurred at the upper part of the lower lobe, but appeared to be extending upwards into the upper lobe, where more recent sloughing was in process. Numerous minute abscesses riddled the indurated tissue at the back of the lower lobe. The pleura was thick and adherent over the consolidated lung, and the bronchi and bloodvessels were apparently thickened. The microscope showed great thickening of alveolar wall and obliteration of alveoli, partly by pressure, partly and mainly by development of a fibro-vascular tissue within them, in the most advanced portions. Where the change was less advanced, the alveolar walls were but little altered, but the intra-alveolar exudation-products were undergoing fibrillation and organisation, and in the vicinity of the suppurating foci inflammatory cells pervaded the extra-alveolar tissue, whilst the intra-alveolar products were mostly shrivelled and degenerate. The left lung was emphysematous, but free from induration. The kidneys were granular and the liver fatty. The case was that of a plumber, forty-one years of age, but broken down and aged-looking, who had suffered from winter cough for ten years, but whose illness, for which he was admitted into the Middlesex Hospital, under Dr. Greenhow, on Oct. 23rd, dated from two months. He was in an extremely prostrate state when admitted, and after about twelve days' stay he died from exhaustion and uncontrollable diarrhœa. Dr. Coupland said that organisation of the intra-alveolar exudation products (as distinguished from growth into the alveolus from its wall) was not sufficiently recognised. It had, however, been described by Dr. Green in his work on Pathology, who there states that he has met with three instances of this change. It was of importance as clearly demonstrating the inflammatory nature of such a form of lung disease, as distinguished from a "fibroid degeneration" or "cirrhosis," of which such a specimen as the present might be thought to be a well-marked example.

Dr. BUCHANAN read a paper communicated by Mr. W. H. Power upon certain observed Relations between Diphtheria and Milk, remarking that when it was remembered how much the etiologists owe to the pathologists in the elucidation of disease, he could not but think that the pathologists would value in their turn any suggestions for further research furnished by the etiologist. The present note was the outcome of Mr. Power's research into the recent epidemic of diphtheria in North London, where it was proved beyond a doubt that the disease had a distribution corresponding to the distribution of a particular milk, and, so far as it is possible, it has been demonstrated that in this instance the milk was the cause of the diphtheria. But how did the milk become capable of distributing the infection of the diphtheria? Here an interesting fact came out in the course of the inquiry, for it was found that the milk-supply came from two sources, one from cows kept at Muswell-hill, and the other from some at Kilburn, both sets belonging to the same owner; and whereas at one period of the epidemic the potency to do harm seemed to come from the Muswell-hill source, and not from the Kilburn, yet later on there was, as it were, a transference of such morbific agency, so that afterwards it was the Kilburn milk alone that appeared to have relations with the infection. No external conditions could be found to account for this, and the conclusion appeared to be forced on the mind that in some condition of the cow as cow, and of her milk as milk, is to be found the possible source of the morbific agent. The history of other milk-epidemics was considered in this connexion. First, as to enteric fever. In many instances in which a relation has been traced between milk distribution and enteric fever there is no doubt of the disease being due to the dissemination of milk contaminated by impure water or air. There are other examples where such introduction of water or air has been but obscurely made out, whilst there remains a third class where the intervention of infected air or water has seemed unlikely, and where the readiest explanation of the outbreak would be afforded, if milk, apart from air or water contamination, could be regarded as the source of the disease. In other words, supposing that milk *per se* were able to produce enteric fever, the observed facts o such epidemics would tally better with the hypothesis o direct infectiveness of milk rather than with the intervention of water or air. In scarlatina there are instances of milk epidemics, in which the facts are such as to suggest that some condition of the milk alone is capable of producing the disease. In diphtheria, in the epidemic just mentioned, no support is given to the hypothesis that any antecedent human cases are necessary for the origin or propagation of the disease. As to the probability of such contagious diseases being communicable from animal to man. Mr. Power points out that already we know of several diseases in the cow capable of infecting the human subject. There is vaccinia, *ejusdem generis* with human small-pox, which can be produced in the cow by inoculation with small-pox matter, but which in the cow is a comparatively harmless disease, and not having the properties of human small-pox; for vaccinia in the cow does not tend to spread in the air from cow to cow; it affects the udder and does not appear to influence the milk secretion. There is the "foot and mouth" disease, which affects the milk secretion to a certain extent, and gives rise to aphthous affections and disturbances of the stomach and bowels among consumers of the milk. Then there is miliary tubercle of the cow. Animals consuming the milk of tubercular cows have been known to get tubercle; and possibly this may be true of man also. The anthrax fever is known to communicate an analogous disease to persons eating the flesh of cattle which have died from its effects, and a throat disease among pigs that have been fed on it and on the milk. Lastly, if an instance of a parasitic disease may be taken which, comparatively harmless in the quadruped, is of serious import in man, the case of trichinasis may be cited. With such instances in mind there appears to be *primâ facie* ground for considering whether diphtheria may not be produced in man by the ingestion of milk contaminated and altered by some condition of the animal itself; and the question naturally arose whether, for instance, in the North London epidemic any particular disease prevailed among the cows furnishing the milk, and if so, whether such disease were specific or not? Whatever it is, it must be an affection which disturbs but little the general health of the animal, whilst affecting the quality of the milk. "Garget" is the trivial name given by cow-keepers to a disease which at times affects milch cows. It is an affection of the udder, and it attacks usually one or two, seldom all four, quarters of the udder, being accompanied by swelling of the part and by the discharge of blood-stained milk from the teat or teats, with subsequent discharge of ropy fluid and blood. But the quantity and quality of the milk yielded by the sound quarters of the same udder are not altered. It was said to lead to no obvious effects in the animals, but Mr. Power was only able to glean information from non-medical witnesses. He also learnt that there was another affection of the cow, characterised by the admixture of blood with milk, without decided affection of the udder. The period of the inquiry into the North London epidemic, when he had learnt the above facts, was too late to test their application in that instance, and his inquiries of the owner of the dairy in question served only to show to him that the cows might suffer from garget without the owner hearing of it, the affection being regarded as so trivial a one. Mr. Power's note concluded by pointing out that in garget we have a disease which can pass unobserved in the cow, and yet possibly it may have relations with human diph-

theria, and it was therefore worthy of further study.—The PRESIDENT, after alluding to the importance of encouraging the study of diseases of the lower animals, said that he could thoroughly endorse Dr. Buchanan's statement as to the connexion between milk and the epidemic of diphtheria in North London, having been fully made out by Mr. Power in his report. The subject of the communication of diseases in animals to man had always been to him of deep interest; and he would cite hydrophobia of man as being another instance in which the human disease differed in its clinical course from the same affection—rabies—in the dog. On the occasion of the Marylebone epidemic of enteric fever from milk contamination five years ago, some people started the notion that possibly it was not due to the admixture of contaminated water, but was dependent on some disease of the cow. For his own part, he was firmly convinced that then it was due to the water, and it was quite new to him to learn that enteric fever might originate in the cow.

Mr. A. H. SMEE then read a paper upon Garget, having been led to inquire into the subject from Mr. Power's conclusion after his investigation into the North London epidemic of diphtheria, that the outbreak was connected with the milk supply, but that there was no evidence to show that the milk was contaminated after it left the cow; and he wished to know whether there existed any form of disease among cattle which, although capable of fouling milk, produced so little constitutional disturbance in the animal that the disease might escape the notice of dairymen. Mr. Smee found, on inquiry, that a condition of ropy milk connected with a state of the udder, in some districts called "garget," was of such a nature. So lightly is it regarded among dairymen that Mr. Smee found, when making experiments for his work on milk, that his own bailiff, who was engaged in collecting specimens of milk of diseased animals in the district, did not think it worth while to call Mr. Smee's attention to cases of it which were occurring among his own cows. Nor was it much known to veterinary surgeons, as the cowmen treat the disease themselves, and frequently do not inform their own masters, believing that their own ill-treatment or carelessness in milking may be the cause of the disease. The quality of the milk is, however, greatly altered, so as to spoil for "setting" a large quantity with which it may be mixed; but when used for immediate consumption it is very probable that dairymen would not detect any change in it. Mr. Smee then read the answers forwarded to him from different parts of England and Wales to the series of questions he had framed bearing on the affection, which it is impossible here to give in detail; and then proceeded to state that it was obvious from these replies that under the generic name of garget there are more than one form of disease. First, a garget referred to traumatic origin, from blows on the udder, or pressure on it, or rupture of a vein in stock-making—i.e., leaving milk in udder for twenty-four to forty-eight hours, in order to enhance the value of a cow for sale. Probably the larger number of cases of ropy milk arise from this cause. Calves fed upon the milk of this kind of garget do not appear to be affected in general health. Secondly, a form of garget produced by cold, which runs an acute course. It does not appear to affect the general health of the animal, or the health of pigs or calves which may be fed with the milk. Thirdly, a form which occurs less frequently, and is possibly of a specific nature. This form not only appears to affect the general health of the animal (as in one case, where a cow had loss of power on the side of the affected quarter), but it also seems to affect the milk in such a way that it may injure the health of calves. An analysis of milk from the affected quarter of a cow stated to have ruptured a vein in stock-making yielded—total solids, 11·97; fats, 2·95; non-fatty solids, 9·02; ash, 0·62. And, although distinctly coloured, as from blood, no blood-corpuscles could be found under the microscope, but only particles of bone-colouring matter of indeterminate nature. Another specimen, supplied by Dr. Jacob from a cow suffering from some form or other of garget, yielded—total solids, 11·7 per cent.; fat, 2·5; non-fatty solids, 9·2; ash, 0·76; and the microscope revealed nothing abnormal. Such milk would have been passed as good milk by a public analyst, but at the same time the cow from which this specimen was taken had passed through the acute stage, when probably the milk was more altered. It is a coincidence of great importance, upon which Dr. Jacob would write, that when diphtheria broke out at the Princess Mary's Home at Woking this garget existed in the farm which supplied the Home with milk. The chain of evidence connecting garget with diphtheria is at present altogether incomplete. Mr. Smee concluded: "Considering the universal employment of milk as an article of food by all classes of society, I have thought it desirable at once to bring under the notice of this Society my researches on garget, because a thorough investigation of milk in disease would, I venture to believe, reveal many facts of importance to the health of the human subject. It is, however, an investigation that would be surrounded with great difficulties. It would require many observations to be made in different localities under varied circumstances, besides requiring the expenditure of much scientific skill and money. A thorough investigation would be far beyond the means of any private individuals, and perhaps beyond the resources even of our scientific societies; and the subject promises, I think, to be one of sufficient importance to deserve inquiry by Government."

The PRESIDENT remarked that, even if time permitted, it would be difficult for the Society to discuss the novel questions so ably brought before them. Much valuable information might be gained by appointing a committee to investigate the nature of "garget," as well as the chemical and microscopical characters of the milk secreted by the affected gland. The Brown Institution would afford facilities for such research, and he begged to nominate the following gentlemen to serve on such a committee:—Dr. Buchanan, Dr. Sanderson, Dr. Greenfield, Mr. Smee, and Dr. Coupland.

The annual report of the Council was then read by the Hon. Secretary (Mr. Morrant Baker); and also the Treasurer's report. On the motion of Dr. Tilbury Fox, seconded by Dr. Longhurst, these reports were received and ordered to be printed in the Transactions.

The ballot having taken place, the scrutineers (Drs. Barlow and Houghton) reported that the gentlemen whose names were published last week had been duly elected to serve on the Council for the ensuing year.

Dr. HARE, in proposing that the best thanks of the Society be given to the retiring President (Dr. Charles Murchison) for his able and efficient services during his two years of office, spoke in warm terms of the earnestness and zeal with which Dr. Murchison had thrown himself into his duties, and the great advantages the Society had derived from his Presidency.—Mr. EDGECOMBE VENNING having seconded the motion, it was carried by acclamation.—Dr. MURCHISON, in cordially thanking the Society for the vote, said he should always look back to those two years with feelings of the greatest pleasure, and ever retain the warmest interest in the welfare of the Society. He referred to some of the changes that had been inaugurated during his term of office. It was a great satisfaction and honour to him to be succeeded in that chair by a gentleman so eminent as Mr. Jonathan Hutchinson, and he congratulated the Society upon their choice.

Votes of thanks to the retiring Vice-Presidents and members of Council were proposed by Mr. Hutchinson, seconded by Mr. Kiallmark, and acknowledged by Dr. Greenhow.

The Society then adjourned.

OBSTETRICAL SOCIETY OF LONDON.

ANNUAL MEETING, JAN. 1ST, 1879.

PRESIDENTIAL ADDRESS.

BY CHARLES WEST, M.D., F.R.C.P.

GENTLEMEN,—It seems but yesterday since I thanked you for the honour, the unexpected, unmerited honour, which you had done me in electing me your President, and now, at the end of two years, so quickly flown, I stand here for the last time to resign into your hands the honour and the trust.

First of all, gentlemen, let me thank you for the kindness with which you have borne with me, the unvarying courtesy with which you have received me, the friendliness with which you have seconded every effort I have made for the advancement of the interests of the Obstetrical Society.

You have already given your verdict on those changes in the laws by which your Society is governed, which the Council, after mature and most patient consideration,

thought that the experience of five-and-twenty years had shown to be desirable. I sincerely hope that the alterations that you have sanctioned will help to secure the greater usefulness and more abiding prosperity of the Society.

In its internal affairs this prosperity is unabated, and the number of our Fellows has even slightly increased. Our greatest trouble is that we need more space to provide for the yearly increase of our library, and for the proper display of our valuable collection of casts and instruments and drawings. This subject, I have no doubt, will engage the attention of my successor in this chair, and of the new council his coadjutors.

I had hoped to congratulate you on this occasion upon the regulations proposed by this Society for the education, examination, and registration of midwives having become the law of the land. The principles of the scheme not only met with the approval of the Medical Council, but were embodied by his Grace the Duke of Richmond in the Medical Acts Amendment Bill, which, but for the troubles in the East, would, there is every reason to believe, have passed both Houses of the Legislature.

Medical legislation, however, is at the best beset by so many difficulties, requires the conciliation of so many conflicting interests, and unfortunately gives an opportunity for people to indulge so many crotchets, that it has seemed to some of us it might be desirable to detach this simple practical matter from the wider question, and to endeavour to get a Midwives Bill introduced separately into one or other House of Parliament. It does not in the slightest degree involve the interests of the medical profession, but it concerns the welfare of the poor very much.

No step, however, can be taken until we know what action Government intends adopting next session with reference to medical legislation. We cannot but fear that the labours of peace may be as much interfered with this year by the Afghan question as they were last year by the Russo-Turkish war. *Astræa redux* will probably always continue to be a poet's dream. While waiting, we have the assurance of the friendly advice of Mr. Lennox Peel, of the Privy Council Office, to which on so many occasions we have already been indebted.

I may ask your leave to offer presently one or two suggestions with reference to the Society's future, but my next duty is the sad one of counting our losses during the past year.

[The President then alluded to the death, and briefly sketched the professional lives, of—Mr. Allen, of St. John's-wood; Dr. Buckingham, of Boston, U.S.; Dr. Hodder, of Toronto; Dr. Shearman, of Rotherham; Dr. Steele; Dr. Bloxam; Dr. Koch, of Colombo; Dr. Fleetwood Churchill; and Dr. Edmund Peaslee. He concluded as follows.]

I have thus, to the best of my ability, gone through the list of our losses, happily not more numerous than each year too surely brings. I cannot leave this chair without the expression of my most heartfelt wishes for the prosperity of the Society. I do not know that I can prove that sincerity better than by offering to you most respectfully one or two suggestions with reference to its future.

My one regret when I entered on my office is still my one regret on quitting it—namely, that the labours of the Society are circumscribed within such narrow limits, and that they comparatively seldom overstep the boundaries of pure obstetrics. An art so entirely experimental as midwifery must of necessity present to all who follow it a number of problems, which each practitioner year by year answers for himself, and answers for the most part as they have been answered by others years before. A first voyage round the world, a first visit to a far distant country, is full of novelty to the sailor or to the traveller. But the chart of the voyage has long been laid down, the map of the country is in the hands of all; the individual, indeed, has profited, but a record of his experience would teach little to others. I think we should all, both for the sake of medical knowledge in general as well as for the improvement of ourselves in particular, deviate more than we have done from the familiar path, and from time to time say with the poet

"To-morrow
"To fresh fields and pastures new."

I would urge it, too, for this additional reason, that I do not believe any society can continue long to flourish which limits its work within too narrow boundaries. I would gladly see general physicians and surgeons seek our fellowship, take a share in our debates, and contribute to our Transactions. The Chinese have a curious art in gardening, by means of which they dwarf the oak, and from the acorn raise, not one of the giants of the forest, but a stunted shrub. I do not know wherein else the secret consists, but the result is partly due to the tree being planted in a narrow box, which gives the roots no room to grow, and prevents the wholesome changes of the soil. To take an illustration from another class of subjects still more familiar to us all—we know the effect of breeding in and in is to deteriorate the race. I am anxious also for this widening of our boundaries for, if I may so say, a moral reason—that, namely, of preventing personal jealousies and petty feelings from obtaining an entrance into your Society. Family quarrels are proverbially bitter, and I know of no surer mode of preventing them than the adoption into your family of as many as possible not strictly belonging to it, not having the same class of ambitions or interests as yourselves, but bound up with you in the common aim of advancing knowledge and benefiting mankind.

And lastly, gentlemen, may I, in descending from the eminence to which you have raised me, be allowed to borrow the words of one who, had he lived in our day, would have belonged to us, and whose spirit I should wish to be Perpetual President of the Obstetrical Society—William Harvey. In instituting the annual oration at the College of Physicians he uses words which, with scarcely a change, it behoves us well to ponder. He exhorts the Fellows to "search and study out the secrets of nature, but also, for the honour of the profession, to continue mutual love and affection amongst themselves, without which neither the dignity of the Society can be preserved, nor yet particular men receive the benefit of their admission into the Society which they might expect, ever remembering that *concordiâ res parvæ crescunt, discordiâ magnæ dilabuntur.*"

HEALTH OF LARGE ENGLISH TOWNS IN THE FIRST WEEK OF 1879.

IT appears, from the Registrar-General's return, that during last week 5888 births and 4056 deaths were registered in twenty of the largest English towns (including London), having a population estimated to the middle of this year at nearly seven millions and a half of persons. Both births and deaths exceeded the average weekly numbers during 1878, a result partly due to delay of registration during the Christmas holidays in the previous week. The annual rate of mortality in the twenty towns, which had been equal to 32·3 and 30·4 per 1000 during the last two weeks of 1878, further declined last week to 29·1, and ranged in the several towns from 19·8 in Portsmouth and Brighton, to 36·6 and 36·8 in Manchester and Wolverhampton. The fatality of the seven principal zymotic diseases showed a decline from that which prevailed in recent weeks, and was equal to an average annual rate of 3·2 per 1000; while this zymotic rate was less than 1 per 1000 in Brighton, Wolverhampton, and Portsmouth, it ranged upwards in the other towns to 5·3 and 7·3 respectively in Salford and Sunderland. Whooping-cough and scarlet fever were last week the two most fatal zymotic diseases in the twenty towns, causing 131 and 127 deaths. Under the influence of the cold weather the fatality of whooping-cough has steadily increased in recent weeks, while that of scarlet fever has as steadily declined. Whooping-cough showed the greatest proportional excess last week in Manchester and Salford, Bradford, and Leeds; scarlet fever was most fatal in Birmingham, Oldham, and Sunderland. Of 25 deaths from diphtheria in the twenty towns, no less than 16 occurred in London; and whereas 13 fatal cases of small-pox were recorded in London, not one occurred in any of the nineteen large provincial towns. Diseases of the respiratory organs undoubtedly caused the greater part of the excess of mortality in English towns last month, but the Registrar-General's weekly returns do not show the deaths from those diseases in any town except London, in which respect the new form of weekly return for Scotland is superior to that published in England.

THE LANCET.

LONDON: SATURDAY, JANUARY 11, 1879.

RECENT reports from Russia give reason for the belief that plague has appeared in the district of Jerotajevsk, province of Astrakhan. It is possible that there may be an error in these reports, and that typhus is in question, and not plague; for our contemporary, the *Globe*, publishes a telegram received from St. Petersburg on the 6th inst., in which it is stated that the disease was introduced into Astrakhan by Cossacks returning from Turkey. Now, while typhus has been widely prevalent in Turkey, both among the Russian and the Turkish forces, and the disease is known to have been widely scattered in Russia by troops returning from the seats of the late war infected with the disease, it is pretty certain that no *plague* has existed either in Turkey in Europe or in Asia Minor. If the disease now exciting alarm in Astrakhan be an importation from Turkey, it would most probably prove to be typhus. On the other hand, for some little time back, it has been regarded as possible, by those who have been watching the progress of plague during the last two or three years, that the disease would show itself sooner or later in Astrakhan; and the statements made in the various telegrams on the subject, which since the 1st inst. have reached this country from Russia, are quite consistent with the belief that the event feared has at length happened. From the close of 1876 to an undetermined date in 1878 plague was prevalent in the Persian province of Ghilan, at the south-west corner of the Caspian; and probably also the disease existed at the same time in the province of Astrabad, at the south-eastern corner of the sea. The chief intercouse of Russia with Persia by sea is maintained through the ports of these provinces. Again, more than once rumours have spread of scattered cases of plague having occurred on the Caspian littoral of Caucasia. It was natural to conclude, therefore, that, if the disease persisted, Astrakhan would before long come within the range of infection. The recent war has made Russian medical men so familiar with typhus that it is extremely unlikely that an error of diagnosis as between plague and typhus would occur in any part of the empire, especially in a part of it, as at Astrakhan, where the attention has been sharpened in this respect by the possibility of the introduction of plague from Persia having been before the profession there for some time. Again, the statements of the telegrams are more consistent with the existence of plague than of typhus. It is reported that, of 195 cases of the disease existing in Astrakhan, and which had occurred during the first two days of the year, 143 proved fatal. This fatality is much more in accord with what we know of recent outbreaks of plague than of the typhus existing in Turkey and Russia. Moreover, the alarm occasioned by the disease seems inexplicable except under the belief that it is plague. The Governors of Astrakhan and Saratov—the latter province adjoining Astrakhan along the course of the Volga—have been in consultation, and the most energetic measures of quarantine have been taken to prevent the spread of the malady along the ordinary routes of traffic. Further, numerous medical men have been despatched to the scene of the outbreak to study the disease, and give such assistance to the local authorities as may be needed. Again, a meeting of the chiefs of the medical department of the Government, and of other departments, under the presidency of the Minister of the Interior, was held on the 7th instant, to consider the measures to be taken to stamp out the disease. All this betokens that the malady which has shown itself in Astrakhan can scarcely be typhus.

Assuming the disease to be what it is announced to be—namely, plague,—it might have been thought that the Russian Government would have learned wisdom from its late ineffectual attempts to shut the malady out of Russia. During the greater part of 1877, communication with the Persian ports of the Caspian was cut off, and the different routes between Transcaucasia and Persia were placed under the strictest sanitary supervision, in the hope of preventing the introduction of the malady into Russian territory. Notwithstanding the futility of these measures, like measures, so far as they are applicable, are being carried out around the infected district in Astrakhan and on the boundary of that province with the province of Saratov. Again we are to learn, in fact, that the plainest teachings of experience avail nothing against (to use JOHN SIMON'S term) "the paper-plausibilities" of quarantine.

THE disposal of the dead must ever be a subject of anxiety to populous communities. The natural, and, as a must feel, the normal, mode of bestowing the remains of mortality is to bury them in the earth. There is an obvious fitness about this method which no other procedure offers to the sensitive mind. Meanwhile the artificial state of existence we call civilisation has many social and sanitary fruits and consequences which it is necessary to recognise and counteract. Living in crowded cities and towns gives rise to pestilent diseases and multitudinous crimes and inconveniences unknown to sparse or nomadic populations. These the drawbacks of our "higher development," combine to form the price we pay for its advantages. Dying, the defun leave behind them a source of peril to the health of the survivors. The danger increases with the growth of the population and the number of the dead. The question how to bestow the bodies of the departed so that they shall not constitute a nuisance and a danger to the living is one of daily augmenting interest, and is beginning to be pressed on public consideration with an earnestness that, to some extent, indicates the presence of a serious need. It would not be fair to accept all that is urged in the argument in favour of a general recourse to cremation, or some equivalent artifice, as begotten of the necessities of the case. Something must be set down to the credit of that watchful spirit of enterprise which is always ready to take advantage of a real or supposed necessity, with a keen eye to the recompense or honour of relieving it. Cremation and wicker coffins have both a sanitary and a commercial purpose in view, and, looking at the question these projects of "funeral reform" are now pressing on public attention, we must not fail to discount the one purpose by the other.

The practical consideration to which thought may at present be limited is whether the general objections raised to a revival of the ancient practice of cremation are so weighty as to bar its adoption. The arguments against the proposal, as we understand it, are based on several grounds. First, it is urged that there is something foreign to the customs, and antagonistic to the genius, of Christianity in the burning of the dead. We confess that this argument, if successful, would have great weight with us. Taking even the utilitarian ground of reasoning in relation to matters of religion, we cannot help feeling it would be a serious and unwise course to have recourse to any mode of bestowing the dead which should savour of disrespect for the departed or disbelief in the cardinal doctrine of the resurrection. We are not prepared to discuss the question whether cremation actually involves a disregard of these considerations on purely physical premisses. Chemistry, undoubtedly, teaches that the elementary substances of which the dead organism is composed must be liberated, and it can make no practical difference in the end whether that process is effected rapidly and conveniently by fire or slowly in the earth. Nevertheless, something, we would say much, is due to sentiment, and there are not a few persons of average intelligence who recoil from a method which destroys the interstitial life of the body, instead of burying it as a seed in the ground, to be decomposed by vital as well as chemical processes. The materialist will not understand this feeling; the secularist will hold it in derision. We claim an equal right to treat it with the respect it deserves. The Hebrews thought much of the sepulture of the dead; the early Christians were animated by the same sentiment of respect for life in death. Every reference to the disposal of the dead in the sacred writings contemplates burial, and in the New Testament especial stress was laid on the deposit of the body in the earth as a place of rest for the departed, "sown a corruptible body, raised an incorruptible." It is impossible to ignore this aspect of the subject, even if it were wise to do so, which many will doubt.

Next we come to what most of us may regard as a more formidable objection—the politic. Is it safe to sanction the destruction of bodies by fire? It has been urged, against this demurrer, that the metallic and mineral poisons would not be destroyed. If this were the fact, which it is not without reservation—for example, the arsenic found in a cremated body could scarcely be identified as poison,—it is no answer to the objection raised, because the greater number of poisons dreaded are vegetable alkaloids. Every practical man must know that the search for poison in a cremated body must, except in rare cases, be hopeless. If cremation is adopted in this country, it will, beyond question, be necessary to devise—and, what is more difficult, enforce—measures by which the destruction of all traces of poisoning shall be averted. Whether it may be practicable to institute a system of preliminary examination in all cases, or a more rigorous and efficient mode of securing the life of the subject, remains to be seen. It must not, however, be supposed that cremation can be adopted without offering increased prospects of immunity for poisoners, by placing it out of the power of justice to detect a crime after the lapse of weeks or even months, as in the case of several well-known murders. This objection may not be insuperable, but it should be recognised and provided against.

The sanitary aspect of cremation, so far as the object in view is concerned, has long been one as to which all parties are agreed. It is necessary to devise special measures for the disposal of the dead, at least in large cities and populous districts. The expedient of burial in suburban cemeteries is only temporary. It may last our time, but the next generation will be called upon to solve the sanitary problem in a more permanent way. So serious is the question involved, that if cremation were the only process by which the need could be satisfied, it would be incumbent upon us, in the supreme interests of the public, to recommend the waiving of all sentimental objections. We are, however, by no means sure that the consideration is thus narrowed. The method of burial in quick-lime, to which Mr. DONALD NAPIER has recently directed attention, is one that offers many advantages, while, so far as we are aware, it is effective. We offer no opinion as to the manner in which the process is applied to the bodies of criminals hanged and burned within the precincts of the gaol wherein they were last confined. The manner in which the same method has been extensively pursued by the Jewish people is the more interesting. The lime is placed in the shell, and the process of destruction expedited by pouring a few buckets of water over the coffin, no leaden casing being employed or access for the fluid being allowed. It is contended that the chemical change set up is, in fact, "cremation," without any of the sensational or other disadvantages attending the use of fire. The proposal to adopt this process generally is entitled to full consideration. It clearly obviates the worst perils of the earth system of disposal and depuration. These temporary dangers aside, it must be admitted that what may be designated the "earth to earth" method of disposal is, as we have said, the most natural and the best. It should, of course, be recognised that earths differ. Some tend to preserve organic remains deposited in them, and are therefore unsuitable for use as graves. We question whether this matter has received the attention it deserves. An inquiry as to the soil in some of our principal cemeteries would probably issue in the resolution that they should be closed, and other sites adopted in preference. If it be the fact that certain of the grounds in which interments are commonly made with every confidence, have been selected and extolled for the preservative qualities of their soil, this consideration would not be deemed an advantage in view of the new light which has been thrown upon this question since the subject of cremation has been extensively discussed. We venture to suggest that the subject is one of such general and, in a practical sense, vital interest to the community, that it might with advantage form the subject of a special inquiry, to which the medical profession, as in duty bound, would be ready to lend assistance. At present, the sanitary and chemical problems involved are not adequately stated—we doubt whether they are actually understood.

THE influence of section of the two pneumogastric nerves in the neck is stated in works on physiology to be followed by remarkable diminution in the frequency of the respiratory acts, accompanied by modification of their rhythm; quickening of the heart's beat, observable in rabbits, but to a far

greater extent in the dog; paralysis of the œsophagus, and great impairment of the movements of the stomach; and death, which in the case of the rabbit ensues in the course of about thirty hours after the operation, and in the case of dogs after the lapse of a few days. In all instances, examination of the animal's body shows that the lungs are inflamed, and that a more or less acute broncho-pneumonia has been established. The explanation of this condition has been differently given by different physiologists. Dr. REID, who was a careful observer, came to the conclusion that the pneumonic congestion was the immediate result of the section of the pneumogastric nerves, or, in other words, referred it to trophic changes consequent upon injury of the nerves, though at the time he wrote the term "trophic influences" had not been introduced. SCHIFF, who made a large number of experiments at a later date, took the same view, and explained the pathological condition of the lungs as a neuro-paralytic hyperæmia induced by paralysis of the vaso-motor nerves of the lungs, which he erroneously thought were contained in the trunks of the pneumogastric nerves. In fact, SCHIFF denied that any inflammation of the lungs was present, and attributed all the phenomena to congestion. Subsequently the subject was investigated by TRAUBE, V. BODDAERT, and others, who maintained that, since section of the pneumogastrics produced loss of sensibility of the mucous membrane of the larynx and paralysis of the muscles closing the glottis, the animal after the operation was apt to permit the entrance of particles of food into the trachea, the irritation of which set up the inflammation of the lungs in question. It was maintained that the pneumonia could be prevented if the trachea were opened and the animal were allowed to breathe through a cannula; and this view was corroborated by the fact that the same broncho-pneumonia occurred if, instead of dividing the trunks of the pneumogastrics, the recurrent nerves were alone cut and the œsophagus was tied. It still remained doubtful, however, whether death was directly due to the pneumonia, for STEINER found that rabbits only lived four days when, after section of both pneumogastrics, they were placed in a supine position, so that no saliva or mucus could gain entry into the trachea. In such animals no pneumonia was observed. Quite lately an interesting series of experiments has been undertaken by Prof. EICHHORST, of Gottingen, who from his observations on birds, dogs, and rabbits, has been led to the conclusion that the death which ensues in birds after division of the pneumogastrics, and when care has been taken that no pneumonia is established as a result of the entry of foreign bodies into the paralysed larynx, is due to acute fatty degeneration of the muscular substance of the heart. Birds, indeed, do not seem to be liable to pneumonia after section of these nerves; and they die after the double section, not from any disease of the lungs, but purely from the affection of the cardiac muscle. In birds the heart is red and to outward appearance is healthy, and it is only on microscopical examination that the fatty degeneration the fibres have undergone is visible. In rabbits and dogs, on the other hand, striæ may be seen with the naked eye, which, when examined with high powers, show that the fibres have broken down, one or two only here and there showing transverse striation. Treatment with osmic acid shows that the protoplasm has collected itself into irregular masses, as if the contents of the fibres had coagulated in an irregularly varicose manner, and the whole aspect of the fibres shows that they are undergoing retrogressive metamorphosis. Professor EICHHORST is therefore of opinion that the pneumogastric nerves contain trophic fibres of a very definite character, which preside over the nutrition of the muscular tissue of the heart.

THE current number of *Macmillan's Magazine* contains an anonymous article on methods of sick relief, likely, we think, to attract a good deal of attention, but which shows a remarkable ignorance of the subject dealt with. It goes over old ground, and states afresh those well-known numbers which are certainly startling, but which are difficult either to confirm or refute: 1,312,917 out-patients attend, we are told, at the special and general hospitals of London in the course of the year, and we are asked to join in a lament with our author to the effect "that a third or fourth of the community should have fallen into the habit of sponging on the humanity of surgeons and physicians, and on the munificence of those who support great sanitary endowment, is too grievous and disheartening a belief to be readily admitted." It is absolutely impossible to say how many of these patients are counted twice over, or twenty times over, and how many of them have made pilgrimages from a distance to get the advantage of superior advice. There is no saying therefore what proportion of the population is in the habit of receiving gratuitous advice. It would, we admit, be a great advantage if those who are seriously ill could be separated from those who have little the matter with them, so that the precious time of skilled physicians and surgeons should not be unnecessarily wasted. To effect this separation, however, the greatest possible skill and the most practised eye are generally necessary, and if out-patients are to gain any advantage whatever from their attendance at our hospitals, it is by the early detection of the small beginnings of serious maladies.

It may be stated as a rule that it is in the earliest stage of disease that drugs are of most real and decided value, and are capable of cutting short the symptoms. Treatment in the early stage, if judicious, is often a priceless boon; if injudicious, it often means death instead of life. We cannot, therefore, accept the suggestion thrown out by the writer, that the poor out-patients are first to be sorted by persons of inferior skill, or that chemists and druggists should be permitted to prescribe for persons "slightly" out of sorts, for the whole skill consists in determining whether a derangement which is apparently slight is so or not.

For the information of the writer in *Macmillan's* we will recount two instances of chemists' practice. The first is that of a man who strains himself at work, who fails to get the accustomed action of his bowels, and who enters a chemist's shop for advice complaining of constipation and vomiting. A dose of castor oil is prescribed for him, which he vomits in the shop, and then a powerful "antibilious" purgative medicine is administered. This is also vomited, and then this victim of counter-practice repairs to a hospital, where he is operated upon for strangulated hernia. Another instance is that of a woman suffering from "sick headache," for which a chemist prescribes a black draught. She died

of perforation of the bowels induced by the draught, the headache having been merely the first symptom of typhoid fever. It is a very nice question to determine how far it is advisable for paternal government to step between the ignorant poor and the equally ignorant chemists who are willing, in exchange for money, to advise them to buy drugs which may merely increase their troubles. *Caveat emptor* is perhaps sufficient caution for him who purchases drugs as well as other things, but the purchaser ought to be able to distinguish the shop of one who is from one who is not competent to give advice as well as medicine. It is all very well to provide cheap medical advice for the poor, but we should, at all events, be careful that it is efficient. If those who cannot pay for or otherwise obtain advice choose to prescribe for themselves, they can easily obtain any wished-for nostrum, provided it be not poisonous. It is surely better that they should pursue this course at their own risk than that the Apothecaries' Act of 1815 should be repealed.

Annotations.

"Ne quid nimis."

HEALTH OF THE EARL OF BEACONSFIELD.

THE health of the Prime Minister has during the last few days given rise to considerable anxiety. We are glad to learn upon trustworthy authority that, although the noble earl has been suffering from an attack of gout, there is no reason to fear it will assume a serious aspect. The affection is progressing favourably, and there is at the moment we write every prospect of a rapid recovery. The general health of the Premier has been good during the last few months, and the present indisposition is happily of an unimportant character.

MR. GLADSTONE.

WE are glad to hear that the reported illness of Mr. Gladstone has been exaggerated. The right honourable gentleman is convalescent from the slight attack of indisposition under which he laboured at the commencement of the week.

THE WAR IN AFGHANISTAN.

LETTERS from medical officers serving at the front have reached us by the last Brindisi mail, with dates to Dec. 10th, confirming the accounts we published last week as to the efficiency of the medical arrangements of the Khyber and Khurum forces. The field hospital at Ali Musjid, under the medical charge of Surgeon-Major G. S. Davie, had been split up, in conformity with the *précis* of instructions issued by Surgeon-General Ker Innes, one-half following the advance to Dakka, thus completing the chain of communication from the front to the base hospitals at Peshawur. The great and ever-present difficulty of carriage had so far been fairly met by the commissariat. Our correspondent strongly urges the importance of the medical transport—camels, carts, elephants, &c.—being placed at the absolute disposal of the principal medical officer in the field. This point is one of the mainsprings of the Surgeon-General's system. It is obvious that if the hospital transport is liable at any moment to be removed from its original purpose, the whole machinery for the rapid transmission of sick and wounded from the front will be thrown out of gear, the sick will suffer, and the medical department be undeservedly blamed.

Mr. Ker Innes, after accompanying General Sir Samuel Browne's force as far as Dakka, returned to Peshawur on Dec. 6th, inspecting the field hospitals *en route*, and lending his authority and experience to further perfecting the arrangements. The wounded at Peshawur are reported as all doing well. At the latter place it was in contemplation to open an officers' hospital. As winter advances it is probable that many officers will be knocked up by exposure and climate. Accommodation in the shape of hotels or dâk bungalows (rest-houses) at this frontier station is of the roughest description; nursing and proper attention are unattainable; the boon, therefore, of a comfortable hospital will be no small one.

At Kohat, the principal base of the Khurum force, the hospital under Surgeon-Major Curtis Martin is in good working order—described as "rough, but clean, comfortable, and orderly." The sick and wounded of General Roberts's command at the Piewar were shortly expected from the field hospital at Thall.

During the absence of Surgeon-General Ker Innes at the front, the office of the principal medical officer to the British forces has been conducted by Surgeon-Major Marston—no sinecure of a task. The concession to carry out the new system was only wrung from the Government of India a few days before the troops left cantonments for the field; but *labor omnia vincit*, and the testimonies of medical officers now on our table are unanimous in its praise, as simple, efficient, and economical.

ST. BARTHOLOMEW'S HOSPITAL: CASUALTY DEPARTMENT.

THE administration of the resources of St. Bartholomew's Hospital is a subject of great interest to the public and the medical profession; but little light is thrown upon it by the paper in the fourteenth volume of the St. Bartholomew's Hospital Reports, entitled "An Account of the Casualty Department." In addition to the regular patients—in-patients and out-patients—of St. Bartholomew's Hospital, are the patients who flock in thousands to the casualty rooms, to be seen by that portion of the staff called the casualty physicians. Dr. Robert Bridges, who writes the account, is one of the three casualty physicians. The literature of hospital work is still very defective in facts. Dr. Bridges' paper is a valuable contribution to it, and contains some facts. True, it lacks many more which are necessary to a perfectly just estimate of the use and abuse of the work done in the out-patient department of hospitals. But it contains statements which must be further illustrated, and exposes a system which it is not for the good of the people or of the profession should continue. Dr. Bridges represents the duty of the casualty physician under the figure of a sieve. They have to filter something like 500 patients in a morning, and to do the filtering business in two hours, so as to have the filtrate ready by 11 o'clock. They are supposed to dismiss the slight cases, to send on the graver ones to be regular out-patients, and the gravest for admission as in-patients. A casualty physician may in this way in a morning be confronted with 200 people! It must not be supposed that the greater bulk of them have nothing the matter with them. This is a fallacy that needs exposure. Dr. Bridges has classified them, from such actual observation as under the circumstances was possible, thus: "Many of them seriously ill, some mortally, many but slightly, but *nearly all with considerable bodily inconvenience or pain*, which, unless disease be a joke (and this the whole constitution of our hospital forbids us to suppose), entitles them to his patient attention and investigation, and demands his skill and advice." Dr. Bridges shows us that something like 190,000 patients a year are seen in the casualty department alone by himself and his colleagues, at the rate of a patient in a minute and a quarter! The medicines are supplied chiefly

out of jugs, and at a trifling cost. The medicines, however, are not without therapeutical value. They consist essentially of purgatives; a mixture of iron, sulphate of magnesia, and quassia, and cod-liver oil,—fulfilling the two great indications of all therapeutics—elimination, and the supply of some elements to the blood. Dr. Bridges founds on the small cost of the medicines supplied an estimate of the profitableness of those practices in which medicine is supplied out of jugs, and patients seen at the rate of one a minute, for sixpence or a shilling. It is one of the most awkward parts of this casualty system at a recognised and respectable hospital like Bartholomew's, that it seems to give sanction to loose and haphazard modes of practice which degrade medicine in the estimation of the public. Of the 30,000 patients seen by Dr. Bridges in three months, he took notes of only seventy. The conspicuous, and, of course, inevitable defect in Dr. Bridges' paper is the want of any information as to the social and economical condition of the people whom he was relieving. This essential element in all such investigations is almost invariably omitted. It could only be supplied by appointing skilled investigators for a year. Here is a piece of work worthy alike of the enlightened treasurer of St. Bartholomew's and of the large funds which he administers. Dr. Bridges does not find much real abuse of the hospital in the sense of people coming with unreal or fanciful disease. It is the rich who suffer from vapours. But the question is, what proportion of these hundreds of thousands that seek relief at a hospital under conditions that really are discreditable to the hospital and deceiving to the people, have any right in a hospital at all? Clearly the casualty-physicians cannot investigate such a highly complicated question. They have already too much on their hands. But it ought to be severely investigated, and some of the affluent funds of Bartholomew's would be well spent in such an investigation.

THE GROWTH OF ENGLISH URBAN POPULATION.

THE Registrar-General, in his first Weekly Return for 1879, publishes the official estimates of the population of London and of nineteen of the largest provincial towns in the middle of this year. Upon these estimates the vital statistics of 1879 will be calculated. The population of these twenty towns in the middle of this year is estimated at little less than seven millions and a half of persons, of whom 3,020,868 reside in London, and 3,763,131 in the nineteen provincial towns. Among those nineteen towns the two smallest are Plymouth and Wolverhampton, with 74,293 and 75,100 inhabitants respectively; while the population of the other towns ranges upwards to 538,338 in Liverpool. Manchester and Salford, virtually one city, although under two distinct municipal governments, are credited with an aggregate population of 539,668, slightly exceeding that of Liverpool. Comparing the estimates for 1879 with those for 1878, we find that the increase in the population of these twenty towns during the year is calculated to be 114,023, of which 43,564 appears to have occurred in London, and 70,459 in the nineteen provincial towns. The increase of urban populations is partly due to the excess of births over deaths, and partly to aggregation. During recent years the population of registration London has been overflowing its borders—in other words, the estimated increase of population has been less than the actual excess of births over deaths. For instance, during 1878, the births in registration London exceeded the deaths by 45,489, whereas the Registrar-General estimates that the increase of the metropolitan population between the middle of 1878 and the same period of 1879 will not exceed 43,564. This is accounted for by the large increase of population in the outer ring of suburban districts around London. The population of the outer ring in the middle of this year is estimated at 913,172, or 40,461 more than the estimate for the middle of 1878. Thus the estimated year's increase of population in greater London is 84,025, which is nearly equally divided between its inner and outer portions. The estimated increase of population in the nineteen provincial towns is, as above stated, 70,459 persons; as, however, the year's excess of births over deaths in these towns did not exceed 48,875, it follows that 21,584 of the estimated increase is due to aggregation. It should be noted that these estimates of population are, with few exceptions, based upon the rate of increase that prevailed between the last two decennial censuses in 1861 and 1871. So long since the last census, it is impossible to doubt that many of these estimates vary considerably from the actual numbers living in these towns. Decennial censuses can never supply completely satisfactory estimates of urban population in a country where the rate of aggregation to town centres varies so remarkably as it does in England.

THE INFLUENCE OF ARSENIC ON THE BODY.

IN a paper recently published by C. Gies in the *Archiv für Experimentelle Pathologie* (B. vii., p. 175) the results are given of a series of experiments undertaken by him on the effects of the administration of arsenic for a period of four months on pigs, rabbits, and fowls. The quantity given was extremely minute, the rabbits having only 0·0005 to 0·0007 of a gramme, the pigs 0·005 to 0·05, and the fowls 0·001 to 0·008 per diem. In all these animals the weight of the body increased, and the subcutaneous fat was augmented. In young growing animals the bones developed considerably both in length and in girth, and they presented the peculiarity that wherever in the normal state spongy tissue exists, it was replaced by compact bone. The bones of the carpus and tarsus were in this way converted into solid bony masses. Moreover, just as Weigner found to be the case in animals supplied with small doses of phosphorus in their food, a compact layer of bone was found immediately beneath the epiphysial cartilages of the long bones. This was most distinct beneath the upper epiphysial cartilage of the humerus and the lower one of the femur, and was apparent after the arsenic had been given for nineteen days, and where only 0·02 to 0·035 gramme had been taken. It was observed that animals fed in the same stable presented the same appearances in the bones, which Gies refers to the air being loaded with the arsenic eliminated by the lungs and skin of the animals to which it was administered, since he found that the changes were also observed in animals kept in a cage the bottom of which was strewed with arsenic. Besides the changes in the bones, the heart, liver, kidneys, and even the spleen, underwent fatty degeneration. The young of animals fed with arsenic were invariably born dead, though they attained a large size, and presented remarkable hypertrophy of the spleen, and incipient changes in the bones.

SIR WILLIAM JENNER, BART., K.C.B.

THE retirement of Sir William Jenner from the post which he has filled for nearly thirty years at University College and Hospital will be deeply deplored by all past and present students of that school. Sir William was appointed in 1849 to succeed Dr. Walshe in the chair of Morbid Anatomy, and almost coincidently he was elected assistant-physician to the hospital. Both as a systematic lecturer and as a clinical teacher, Dr. Jenner proved himself without a rival, and all who have listened to him must admit that for clearness of expression, facility of illustration, and for that highest form of eloquence which earnestness alone can give, he was unsurpassed in this or probably in any other country. Even so lately as the beginning of the

present session Sir William was giving clinical lectures which were marked by all his well-known force, and which communicated to all who heard him an enthusiasm for those subjects of which he is one of the greatest living masters. It would have been, perhaps, an advantage to medical science if so gifted a teacher could have been enabled to consecrate his life entirely to the work of instructing others, but, unfortunately, in this country we have no endowments which are worthy the acceptance of our master minds. The demands made upon his time by his appointments and the public have compelled Sir William Jenner to tender his resignation, which has been most unwillingly accepted by the Council of University College, who doubtless recognise that in him they lose one who is second to none among the many brilliant and illustrious men who have filled their professorial chairs.

THE MEDICAL DIRECTOR-GENERALSHIP OF THE NAVY.

As the five years' term of office of the Medical Director-General of the Navy expires in April, the first of a great many conjectures are already afloat as to what will be done in the present instance, having regard to the status of the present Director-General, the conditions of the appointment, and the present unpopularity of the Naval Medical Service. Sir Alexander Armstrong has held the post for ten years, and as he has not yet reached the age of sixty, it is possible that the Admiralty may do as they have done recently in several cases, extend his period of service until he has attained that age. Such a proceeding might be considered as a hardship to Dr. William H. Domville (who, according to custom, is the next eligible officer), Dr. Reid, and Dr. Cotton, now senior fleet-surgeon; but no one else would be affected, as no further promotion could, under any circumstances, occur for fifteen months. In considering the general conditions of the appointment it should be remembered that "my Lords" can give the berth to any one, as it is purely civil work, but is usually offered to a senior inspector, the holding of the post for five years necessitating retirement from the active list. If, however, the appointment were given to Dr. W. H. Domville, a vacancy will occur immediately at Haslar Hospital, where the important post of deputy-inspector would be empty, and this awkward hiatus could only be rectified by an order in Council.

MILK AND DIPHTHERIA.

THE meeting of the Pathological Society on Tuesday last—the concluding meeting held under the presidency of Dr. Murchison—was signalised by a suggestive communication from Mr. W. H. Power, of the Local Government Board, read by Dr. Buchanan, in the unavoidable absence of the author; and the question raised by the paper, although admittedly speculative, is of considerable importance to the community. The knowledge gleaned in late years of the connexion between various epidemics and contaminated milk has received additional confirmation from Mr. Power's inquiry into the recent outbreak of diphtheria in the north of London. But in this instance, as in some few others, the inquiry failed to elicit any evidence of the contamination of the milk, either during the process of milking, or between that time and its distribution to the consumer. The chain of evidence by which any such external contamination was disproved is admirably given in Mr. Power's report to the medical officer of the Local Government Board, which was laid on the table of the Society; and at length the only possible conclusion that could be drawn was that the milk derived its morbific potency from the animal itself,—that, in short, it appeared as if the diphtheria in this instance was communicated from the cow to the human subject. Although at first sight such a conclusion wears an air of improbability, it may not, after all, as Mr. Power showed, be so strange, for there are on record other milk-epidemics, notably of enteric fever and scarlet fever, in which a similar conclusion has been forced upon the inquirer. He supported his argument by citing several well-known examples—of which vaccinia is the most familiar—of disease communicable from the cow to man, diseases which in the animal may be of comparatively trifling nature, whilst in the human subject they are severe and virulent. Then arose the question whether there was any affection in the cow which, whilst affecting the animal's general health so slightly as to be disregarded by the owner of the animal, should yet induce such a profound alteration in the quality of the milk as to convert it into a disease-producing agent, one more addition to the lengthening list of animal poisons. The subject is not pleasant to contemplate, but it appears that there is at any rate a common affection, or group of affections, known as "garget," which, attacking the udder, obviously alters the secretion from the gland, so that this becomes viscid and blood-stained; whilst at the same time it is held of so little import by the dairyman that milk so altered may be distributed to the consumer. Some more light was thrown upon the nature of "garget" in the paper read by Mr. A. H. Smee, which indeed affords all the present available knowledge on the subject. That gentleman gathers from the result of his research that there are at least three distinct forms of disease going under this name; and he pointed out how great was the necessity for its full pathological elucidation, which we must look to the committee to provide. As to the larger and more important question of the possible connexion between such disease in the cow and diphtheria it is impossible as yet to do more than speculate; and in the true interests of preventive medicine it will be the wisest course to be extremely cautious not to admit that any such association has yet passed, nor that for some time to come it can pass, beyond the limits of hypothesis. We reserve for another occasion a more detailed account of Mr. Power's report on the North London epidemic.

MR. FENTON'S RESIGNATION.

THE question at issue between Mr. Fenton and the guardians of St. George's Union is one of exceeding gravity. A medical officer has nothing to do with the business of administering other than medical relief, and by the Consolidated Order medical relief is limited to surgical aid and medicines. In certain cases boards of guardians undertake to supply some of the articles commonly classed as drugs—for example, cod-liver oil; and it is then expressly understood that the medical officer retains control of the use of these things. Meanwhile he has no control over the parochial larder, and cannot "order" articles of ordinary food. When the practitioner prescribes food, and is asked by the pauper to "recommend" it because he is too poor to procure it otherwise, he discharges his official duty by filling up the form. It may, and doubtless does in many cases, happen that paupers try to impose on the humanity of the "doctor." At the same time, it must be perceived that by empowering, and even asking, the district medical officer to "recommend" *necessaries*, the Poor Law recognises his right to an opinion as to the poverty of the pauper! If this were not so, the Consolidated Order would not require his interference in the matter of food. The "recommendation" is *de facto* more than a prescription; it has for its basis the question of *need*. If that question were not, to some extent at least, submitted to the medical man, he would not be supplied with forms for the recommendation of articles of food; it would be assumed that the relieving officer settled the whole business. As the matter now stands, the position of the medical officer is anomalous, and when

his opinion, given in compliance with an instruction in the Consolidated Order, is treated with systematic contempt, it becomes untenable by any man of spirit or humanity. The treatment Mr. Fenton has received at the hands of the Guardians of St. George's Union is discreditable to that board, and in supporting the local body against the medical officer the Local Government Board has placed itself in a false position which we have reason to believe will be exposed in Parliament. The position taken by the President of the Local Government Board is at once impolitic, and, as we believe, opposed to the spirit, if not the letter, of the Poor Law. Before the matter goes further, we submit to the consideration of the President and the Secretary, whether, with all the care deemed necessary, and doubtless observed, in wording the letter calling for Mr. Fenton's resignation, the plain facts have not been overlooked? It is admitted by the Local Government Board and by the guardians that there was no complaint against Mr. Fenton. He has been victimised to oblige the guardians of St. George's Union, and to pander to their policy of driving out-door paupers "into the house" or off the lists. Mr. Fenton stands well with the profession, and will have the sympathy of every humane person in the position he has assumed as the friend of the sick poor. It will not, we fancy, be found a wise course to offend the instincts of humanity in the fashion which has been adopted in this case, and we shall not be surprised to hear that the President of the Local Government Board sees reason to regret the course to which he has given his official sanction.

THE DRAINAGE OF THE ESCURIAL.

THE most celebrated Royal residence in Spain is not free, it appears, from those dangers that beset humbler homes. The drainage is described by one of our correspondents, who recently visited the Escurial, as simply execrable. In a portion of the palace which is annually inhabited by the royal family there is a suite of apartments beautifully ornamented with marqueterie work. Here one room is especially set aside as the King's study, and his magnificent inlaid writing-desk and bureau never fail to impress the tourist and visitor. Our correspondent's attention was, however, attracted by a highly ornamented but apparently useless door fixed in the inner wall of the room. On opening this he found immediately on the other side a dark but luxurious watercloset. Lighting a taper rapidly he was able to ascertain that the trap was an ordinary one, and did not close hermetically. Looking around, he could discover no aperture by which the closet could be ventilated. There was no window, no skylight, no opening whatsoever. Nor would it have been easy to provide any, as the closet was situated in the centre of the building, far away from the outer walls. Of course there are no sewers at the Escurial, and the drain must descend to a cesspool. The gas there generated must naturally ascend by these drains, especially when disturbed by the downfall of water, force its way through the inefficient trap into the closet, and pass out by the chinks of the door into the King's study. From here, if the windows are shut, it must travel through the other rooms of this compact apartment till at last a staircase-chimney or window gives exit to the poisonous emanations. An architect responsible for the creation of so dangerous a state of affairs should be deprived of the right of building any dwelling, whether a palace or a cottage. It is generally supposed that the untimely death of King Alfonso's consort was due to enteric or sewer fever. We do not know if the Queen had been staying at the Escurial shortly before her death, but, if so, the impossibility of ventilating the closet we have described may account for her fatal illness. Surely in the nineteenth century, and in the palace of a king, the most elementary principles of hygiene should not be ignored. His Majesty might very well fail to notice the presence of mephitic gas, often imperceptible when most injurious, but there should be some men of science about his person capable of warning him against a danger which is so self-evident. Such neglect is more to be dreaded than the bullet of a Moncasi.

POST-MORTEMS IN PRISONS AND ASYLUMS.

AT a recent inquest on a person dying in the House of Correction, Coldbath-fields, the Coroner's jury made a representation to the effect that they had the right to view any portion of the prison in which the prisoner deceased had been either working or confined, and to judge for themselves whether the arrangements and discipline conduced to the death. The foreman added that "he was also of opinion that when post-mortems of deceased prisoners were made they should be performed by independent medical practitioners outside, and not by the surgeon of the prison." The alleged "right" of the jury must rest on purely legal grounds, and it certainly seems, from the constitution of the Coroner's court, that any *right* of the kind, if it exists, must be vested in the Coroner. As to the opinion expressed with regard to post-mortems, the view propounded by the foreman is certainly justified by reason and prudence. The question has been raised in another form in connexion with asylums for the insane, and although the law officers of the Crown have very properly decided that the medical superintendents have the power of making examinations for scientific purposes, it is certainly desirable that the body of a patient who *may* have died from some injury should be examined by and in the presence of an impartial expert. It would probably be impracticable to secure the presence of an outsider at every examination of a patient dying in a lunatic asylum, but there can be no difficulty in providing against the remote possibility of abuses in the case of prisoners dying in Her Majesty's gaols or houses of correction. We entirely endorse the opinion of the foreman, and shall be glad to hear that steps have been taken to bring the subject before Parliament, supposing that any change of the law is necessary to attain the object desired.

LUNATICS AND LUNATICS.

A STATEMENT, made in evidence before the Select Committee of the House of Commons on lunacy law, to the effect that probably one-third of the patients now in asylums would do better for themselves and the public under proper supervision in establishments somewhat similar to that at Gheel, has been misconstrued to mean that one-third of the inmates of asylums are not insane. This is, of course, an obvious misrepresentation; but it is very much of a piece with the erroneous impression which seems to prevail with respect to lunatics—namely, that if not actually under coercion in an asylum, they must needs be wholly left free of control. This is a most perilous doctrine, and scarcely a week passes without convincing proof being given of the fatality of the error. The liberty of the subject is a great matter of concern, but the safety of the community is greater, and it is difficult to view with complacency the risks to which the public are exposed by the number of men and women who, having been in confinement, are allowed to assume positions surrounded with the largest opportunities for mischief without the smallest safeguard for themselves or those with whom they are brought in contact. The question involved will probably never receive full solution until the treatment of mental disease is severed from that of social disability, because persons who are consciously the subjects of mind disorder will never seek relief in treatment while that recourse means social disability. Meanwhile it would certainly be prudent to issue instructions to the police enjoining them to present for the notice of the relieving

officer of the district—the legally-appointed agent in such cases—persons who are known, or observed, to exhibit unmistakable tokens of the lapse of self-control. Cases of the class are unhappily very numerous just now, and the newspapers contain a melancholy catalogue of the irresponsible mischief these poor creatures work to their own injury and that of their friends.

THE PREVAILING DISTRESS AND THE SICKNESS TO FOLLOW.

IT should not be forgotten by the trades' societies organising strikes, and by charitable persons moved to relieve distress, but reluctant to "encourage" dependence, that after famine or want comes disease. The people debilitated by lack of food and the necessaries of life—albeit many of these have been created by the customs of our "advanced" manner of life—are prone to sickness, and fall an easy prey to any invasion of disease. It will be cheaper and less troublesome to meet the need of the moment than to minister to the necessities of a sick population, and to arrest the progress of some epidemic. This view of the situation should not be disregarded even by the rigid economist. There is a great danger breeding in our midst, and it will be too late to raise the warning cry when it has begun to make its presence felt. The appeal lies not only to the philanthropist, but to the guardians of the ratepayers' purse. A little judicious liberality now will prevent a burden in the future. At the same time the promoters of strikes should be warned that their work is mischievous and perilous. The recourse to that facile weapon, "combination," is too common, and those who adopt it forget that they are not only asserting what they please to call a "right," but sowing the seeds of sorrow for the classes whose interests they affect to serve.

COTTAGE HOSPITALS IN THE COLONIES.

WE are glad once again to draw the attention of our readers to a very successful little institution of this kind established at Bloemfontein, the capital of the Orange Free State in South Africa, and much famed for its dry and salubrious atmosphere in the treatment of chronic pulmonary cases.

The new Hospital and Convalescent Home, which was designed by Mr. John R. Hilder, under the direction of the Bishop of Bloemfontein (who has subscribed most liberally to the building), was opened some fifteen months ago. The plans now before us show that they consist of rooms containing altogether thirty-five beds—viz., one ward with eight beds, one with four, and the others with one or two beds, so that the comfort of all classes is consulted as well as the treatment of certain special diseases. About half the building is ground floor only, and there is an abundance of verandah space—i.e., a great many "stoeps," as they are called in South Africa. The entire structure has a marked absence of stiffness, looks cheerfully home-like, and is enclosed in what soon will be a pretty garden, as a well was sunk before the walls were commenced, which gives an unlimited supply of good water, a somewhat rare possession in those parts. We may safely state that Bloemfontein now possesses that great desideratum, a Home, which those can enter who ought not to be classed strictly as hospital patients, and yet require the sort of care and accommodation that cannot be obtained at an hotel or at lodgings. The Report now before us, compiled by the very energetic and able honorary treasurer and secretary, the Rev. W. T. Gaul, vicar of Bloemfontein, shows that since the opening of the institution thirty-six cases have been admitted, seventeen of which have left convalescent, eleven have been discharged cured, six have died, and two are still in the hospital. Of the six fatal cases four were hopelessly ill when admitted, and the other two were in a critical condition. The total receipts from all sources during the fifteen months under consideration amounted to £994, of which no less than £774 was derived from public subscriptions. No one unfamiliar with the scanty population of the Free State and the surrounding districts can at all appreciate how highly this last financial fact speaks for the generous spirit of all classes of the community in that neighbourhood. The total expenditure was £807 (including £151 for building, as well as sundry special disbursements), thus leaving a surplus of £186, most of which will be absorbed for payment of interest and appropriation. The nursing staff is formed from members of the St. Michael's Sisterhood, to whose zeal and efficiency ample testimony is borne by Mr. Gaul.

We have been thus explicit in our notice of this useful institution because it will show to our readers in other parts of the world how much good in this way can be accomplished by energetic working, even in so small a place as Bloemfontein, which contains only four thousand inhabitants, a comparatively small proportion of whom can be classed as well-to-do. But the knowledge of the existence of this Home is a boon to physicians in London and elsewhere, who are now assured that if their clients have strength to encounter the fatigues of a journey to the interior of Southern Africa, they can be housed comfortably, and tended with skill and care. In future reports we shall hope to have some professional particulars from the medical staff. Meanwhile, in thanking Mr. Gaul for this report from his distant parish, we think (to paraphrase the concluding words of the Report, that he may "look upon the past with gratitude, and upon the future with hope."

"COMPOUND" ADULTERATION.

IT is highly satisfactory to observe the enlightenment and independence shown by the magistrates of the London police-courts in the interpretation of the Adulteration Act. Mr. Woolrych has carried the cause of fact as against legal fiction one step further by the decision that no protection is offered to the fraudulent tradesman by marking an adulterated article "compound." It is in the interest of health and honesty that these covers for the "tricks of trade" should be swept away, and we can only hope that the eminently prudential, and, as we venture to think, logical, interpretation placed on the Act of Parliament by Mr. Woolrych will be confirmed by the superior court. Failing this, it will be necessary to urge the attention of the Legislature to the question, with a view to the prompt reconsideration of plain common-sense and legal fact.

DEATH "AFTER VACCINATION."

A CASE curiously illustrative of the straits to which the anti-vaccinators are reduced in endeavouring to maintain their position, has recently occurred at Banbury. A child twenty months old died, apparently without having been seen by any medical man before death. An inquest was held, and an attempt was made to assign the death to vaccination, which it appeared had been performed on the child "about a month before." Not a particle of evidence was given to show that the vaccination had been injudiciously performed, or that the operation had not followed a normal course from beginning to end. On the other hand, evidence was given to the effect that the child had been ill a fortnight before death, suffering from whooping-cough, and that it was improperly nourished. No post-mortem seems to have been made, and the jury passed the somewhat paradoxical verdict, that the child had died from natural causes, accelerated by compulsory vaccination. The inquest, indeed, appears to have been made the occasion of a sort of anti-vaccination demonstration, the

actors in which seem to have held that proof being given of vaccination having been performed before death, everything else was superfluous in accounting for the cause of death.

SATURNISM IN THE NAVY.

THIS now ancient grievance is at last likely to receive some practical attention at the hands of "my Lords" at Whitehall, although that astute body must have been cognisant of the fact that a large number of men are crippled by it in the Royal Dockyards every year. Staff-Surgeon C. J. Fennell, of Portsmouth Dockyard, has recently reported to his executive chief, Rear-Admiral Foley, that seventy-five cases of lead-poisoning have occurred within his jurisdiction during the past year, owing, as we have many times reported, to the particles of red lead scattered in the process of cleaning the double bottoms of our ironclads. Major Crease, of nautical filter notoriety, has invented a coating which is quick in its operation, and, being in the form of a paste, cleanses without scattering. The cement put on afterwards forms a sort of strong enamel, which dries in about four hours, and is said to protect the iron as effectively as red lead, being besides less costly. As with most things that emanate from Whitehall, we must be content with small mercies, and say thankfully, "Better late than never." The statistical officer in Sir Alexander Armstrong's department might give, for the benefit of the public, the number of cases of saturnine poisoning that have occurred in Her Majesty's dockyards during the last twenty years. Meanwhile we continue to read stereotyped dicta to the effect that "the impracticable nature of many of the regulations (with reference to the subject) have led to their being generally neglected." The "Kismet" policy seems to pervade all departments over which the Admiralty anchor floats.

THE CARDIAC SYSTOLE.

DR. N. BAXT has investigated the relative length of systole and diastole of the ventricle during the increased action of the heart which is produced by stimulation of the accelerator nerve. Donders has ascertained that, when the heart's contractions are rendered infrequent, the duration of the systole of the ventricle undergoes very slight variation. The method employed was to make the ventricle of the exposed heart of a dog write its contractions, by means of a lever placed in contact with it, upon ivory paper. The curve obtained bore considerable resemblance to that obtained by Chauveau and Marey from the right and left ventricle, the duration of the contracted state being much less than the period during which the contraction was taking place. The tracing during rest, and then during strong stimulation of the accelerator nerve, was then compared. The systole was found to diminish in length on stimulation of the accelerator, and to be the shorter the more frequent were the contractions. This result was obtained in each of the three dogs on which observations were made.

THE READING SEWAGE FARMS.

MR. MANSERGH, the civil engineer, has recently published some notes on the sewage utilisation scheme adopted at Reading; and we call attention to it chiefly because the "separate system" is credited with much of its success. The old drains are, as at Eton, Abingdon, and elsewhere, where this plan is carried out in its entirety, utilised to carry off the storm-water into its natural channel—i.e., the nearest running stream. Great care in the Reading system has also been taken to make the sewers water-tight, because here the lower subsoil is often very much charged with flood water, the percolation from which would have exceeded by many times the water delivered from the houses. It appears, however, according to Mr. Donaldson, the resident engineer, that when the sewage of 25,000 persons has been turned into the mains by the very contracted lower drains, the daily volume delivered at the pumping-station is only equal to the water-supply. It is surprising to us that the advantages of the separate system—at all events as applied to moderate-sized towns—are not more appreciated or understood. It seems to us self-evident that the separation of the storm-water from the sewage proper must naturally make the latter far more manageable for removal, and also far more useful for utilisation purposes. And anyone who cares to inspect the sewage farm at, say, Eton, will perceive at once that the process adopted creates no nasal or visible nuisance in the immediate neighbourhood.

THE MEDICAL-WOMAN QUESTION IN RUSSIA.

AT a recent meeting of the Provincial Assembly of St. Petersburg a report of a committee appointed to consider the question of the institution of certain medical scholarships for women was discussed. At a previous meeting this question had been submitted on the motion of M. Sémevsky, and the committee appointed to consider it had been instructed to communicate with the different zemstvos of the province, not only as to the establishment of scholarships, but also as to the employment of medical women in the service of the zemstvos. The report of the committee now presented showed that all the zemstvos but one, that of Louga, objected to the establishment of scholarships for medical women, and recommended that this proposition should be set aside.

WAS IT RABIES?

IF the deliberate statement of officials competent to speak with confidence on the subject was correct, her Majesty's staghounds have been infected with rabies. Assuming this to be true, it is obviously monstrous to permit the pack, or any portion of the pack, to be turned out again this season. The period of incubation in rabies is so long that no assurance can yet be gained that the animals which are to be let loose on the country are not subjects of the disease, and capable of communicating it to stray dogs or any living thing they may attack. The matter is of immediate moment to the farmers and residents in the district to be hunted, and we trust it will be seen to be desirable that the appointments should be withdrawn.

THE RELATION OF THE GLOSSO-PHARYNGEAL NERVE TO THE GUSTATORY CELLS.

M. V. VINTSCHGAU and J. Honigschmied (Pflüger's *Archiv*, B. xiv., p. 443) have made some investigations to determine the relations of the gustatory bulbs to the glosso-pharyngeal nerve, and have divided the nerve, with excision of a portion of the trunk, on one side of the neck in half-grown rabbits. In the course of five months the animals were killed, and it was then found that whilst these had undergone their ordinary development, the gustatory bulbs had completely disappeared, and in their place the posterior part of the tongue presented only ordinary pavement epithelium. The intimate connexion of the two parts seems to be demonstrated by these experiments.

OVER-STIMULATION IN WOMEN.

THE *Gentleman's Magazine* contains an article on "Over-stimulation in Women," by Dr. Frederick H. Daly, on the following text—*that in the present day women in every class of society over-stimulate.* He attributes the evil to the excitement and wear of modern life; to the unwisdom of

young husbands pressing their wives to join them in taking toddy at bedtime; to the exaggerated and ignorant notions afloat as to the use of malt liquors to nursing women; to the readiness of the female nature, if badly advised, to take on habits of intemperance; and last, and largely, to the grocer's licence. "The grocer's licence," the author says, "is the means by which half the over-stimulation among women of the middle class is effected."

AN inquest was held at Birkenhead on Saturday, the 4th, on the body of Mr. W. P. Blakeney, surgeon, who died on the previous day. From the evidence it appears that on New Year's Day, at about six o'clock, Mrs. Blakeney heard the sound of a heavy fall, and on going into the hall found her husband lying at the foot of the stairs with his head downwards, and quite insensible. Skilled assistance was at once obtained, but the deceased never rallied, and death ensued at three on the morning of the 3rd. The jury returned a verdict of "Accidentally killed by a fall down stairs." Mr. Blakeney was 47 years of age, and had been in practice at Birkenhead for upwards of twenty years.

DUBLIN has had an unenviable notoriety for a considerable time past as regards the high death-rate of its inhabitants; but the mortality returns of the past week are positively startling. The births numbered 204, and the deaths 306, the latter being 102 in excess of the former, and equal to an annual mortality of 51 per 1000 of the population. Diseases of the respiratory organs, which have been remarkably fatal in Dublin for the past six weeks, caused 104 deaths, and small-pox was fatal in 22 cases, the highest mortality from this disease in one week since last July.

Correspondence.

"Audi alteram partem."

LISTON AND WATER-DRESSING.

To the Editor of THE LANCET.

SIR,—Liston, undoubtedly, thought and taught that water-dressing was the perfection of the treatment of wounds. And so it certainly was when compared with the other methods of treating incised wounds that were generally adopted by his contemporaries. It was the perfection of lightness compared with a poultice; the perfection of cleanliness contrasted with ointments, often irate, sometimes rancid. That Liston rode his hobby of water-dressing in the treatment of wounds rather hard is undeniable. But I doubt much whether, in this respect even, he has been beaten by more recent innovators in the same field.

Liston died in 1847, and it would be eminently unfair to contrast the views which he entertained up to the time of his death with those subsequently promulgated, and yet more so with those which are the outcome of the great advance in physical science since his day. Liston's mind was eminently plastic. He was always ready to receive and act upon suggestions from others, and had he lived it is probable that his views with regard to the value of water-dressing might have been modified. His death occurred at the most critical period in the history of modern surgery—at that period, indeed, which, if I mistake not, the future historian of our art will date as the commencement of a new era in the treatment of wounds; for his death was almost contemporaneous with the introduction of anæsthetics into practice, and anæsthesia revolutionised the treatment of operation-wounds.

I believe that an erroneous impression prevails as to Liston's method of using "water-dressing" in the treatment of large incised wounds, such as are occasioned by the amputation of a limb or the removal of a breast; and as, with one conspicuous exception, that of Mr. Cadge of Norwich, there is probably no one now living who has seen so much of his practice as I have, I may be excused for describing his manner of using this dressing.

It was as follows:—After the operation was finished the cut surfaces were deluged with cold water, so as to wash away all coagula, &c. A large piece of wet lint, doubled, was then placed between the flaps, which, being laid down on it, were covered with another large piece of doubled lint soaked in cold water. The stump was then put upon a pillow, exposed to the air, and left quiet, though wetted from time to time, for from four to six hours. By this time all oozing had ceased, and the cut surfaces were "glazed." The lint was then removed from between and upon the flaps; if any vessel started bleeding it was immediately secured, and the "glazed" and nearly dry surfaces were carefully brought together by a few points of suture, and supported with strips of isinglass plaster. A slip of wet lint was then placed along the edge of the wound; the stump laid at rest on pillows, but otherwise exposed, without any covering except that afforded by the sheet thrown over a cradle. In this simple way the most favourable results were often obtained—quite as good, I do not hesitate to say, as can be shown by any of the more complicated modern methods of treatment. And it is not a little amusing to see many of those who have obtained their surgical experience during the last decade look upon the primary union of wounds as a modern invention unknown to surgeons who practised and taught thirty years ago. Such error is but an additional proof of that lamentable ignorance of the history of the surgery of the past which is so prevalent in our profession.

On the "glazing" of the wound—the coagulation of the fibrine of the liquor sanguinis over the cut surfaces—Liston laid great stress, and at the time that I was house-surgeon at University College Hospital no one thought of bringing together a wound until this had taken place. He used the "water-dressing" partly as a means to this end, and partly as the cleanest and lightest covering at that time available for the protection of the cut edges.

But the introduction of anæsthetics led to a change in this method of treating operation wounds. From a natural and humane desire to spare suffering to their patients, surgeons, instead of waiting for the "glazing" of the wound, put it up permanently on the operation-table whilst the patient was still insensible to pain. The result of this practice was often most disastrous; for in those days methodical drainage of wounds was unknown, and surgeons had to trust to the apertures between the sutures and to the strings of the ligatures acting as conduits for the escape of blood-oozing or of that sanguineous ichor which is always freely yielded by a recently cut surface, and the retention of which in wounds we now know to be productive of the worst results.

It was not until some years later, when Chassaignac invented and pressed most forcibly upon the attention of surgeons that most invaluable instrument, the "drainage-tube,"—that instrument which is the basis of most modern methods of treating wounds,—that a real advance in this department of surgery was established, and that it became possible to put up immediately a large operation wound without the more imminent peril from retained blood or ichor.

By Liston's method the drainage-tube was not necessary (even had it been invented in his day), for the wound was not brought together till its surface was "glazed" and free from blood and ichor. In this lay the great merit of his treatment by water-dressing; to this its success was due, and I venture to think that in this it might often be imitated with advantage at the present day.

Wounds cannot be "cured," but they will heal readily enough if not tormented by injudicious surgery. Drainage alone is all that is needed to place most wounds in the most favourable condition for healing. And methods of the most opposite character appear to owe their success to the fact of drainage being the one essential element that is common to all. The "antiseptic" method, in which every "germ" is rigorously excluded by clouds of spray and multiplied layers of gauze, and the "open-air" method, in which a wound is left open to all that the atmosphere may chance to deposit upon its surface, differing as they most absolutely do in the theory on which each is founded, appear, in many operations at least, to be about equally successful in practice. This success would

seem to be due rather to the one condition which is common to both—perfect drainage—than to those in which they are so dissimilar. For whether drainage be effected by a tube, or by the free escape of fluids without the use of an instrument, matters nothing, provided always that it be complete.

I am, Sir, yours obediently,

Jan. 5, 1879. JOHN ERIC ERICHSEN.

To the Editor of THE LANCET.

SIR,—I do not presume to express an opinion as to the efficacy of what may be termed the "dry" treatment of wounds, referred to by Professor Lister. Any procedure endorsed by so high an authority must needs be received with much interest, and with due consideration. In the absence of experience I would merely remark (and infer) that success might possibly be influenced by the state of health in the patient, and by the sanitary condition of the hospital or home.

My experience of cold-water dressing and "irrigation" to wounds has been so satisfactory that I should be loth to adopt any substitute without very cogent evidence of superiority.

When in charge of a battalion of my regiment, during the latter part of the siege of Sevastopol, I attributed a favourable issue in wounds and operations mainly to a practice the utility of which I had learned long before under the auspices of [my friend and fellow pupil, Dr. Fenwick, at the Newcastle-on-Tyne Hospital.

With the exception of a case of compound fracture, by shell, of the humerus and femur—the former amputated, the latter "resected"—which succumbed from exhaustion at a date when the arm was half healed, I lost no man after capital operations. They included amputations of the shoulder-joint, thigh, and leg. My plan was to operate at once, night or day, on the arrival of a wounded soldier from the trenches, as I found the stimulant action of chloroform a sufficient counterpoise to "shock." (I may remark, *en passant*, that nearly all were young lads of eighteen to twenty, recently arrived from England, and possessed of but little stamina. Difficulty in obtaining recruits was experienced.) Then, after sutures and strapping, large strips of wet lint, twofold, enveloped the stump. The bandage was also saturated and kept constantly moist by means of a sponge. This treatment was continued until recovery was well advanced. Stimulant lotion to the wound, a cap of wet lint over the stump, and oil silk, were afterwards substituted.

In no instance were there untoward symptoms, nor was a further resort to the knife found necessary. I can recall one case where union by the first intention resulted completely. It did so to a greater or lesser degree in all.

It is only right to add that my hospital was a tent (marquee); its site, the slope of a plateau; and the period of year, summer.

These remarks necessarily apply chiefly to military surgery. I would employ the same system, however, in civil hospitals. Since the period referred to, I saw a very eminent surgeon dress stumps immediately after operation with thick folds of dry lint covered by bandage. In my own mind, the circumstance accounted in some measure for the untoward progress of cases, not infrequently, in the hospital to which he was attached, and in which pyæmia was rather prevalent.

An illustration of the good results of the water treatment comes to mind as I close this letter. My aid was requested in a case of severe gunshot wound. A firelock exploded when resting against the arm, and a charge of shot shattered the upper third of the humerus, close to the joint, into small, jagged fragments, very numerous. Whether amputation at the shoulder should be performed or not was a somewhat critical question. The wound was enlarged, loose splinters removed, and jagged, over-riding, extremities of the bone sawn off. The patient, a favourable subject, made a satisfactory recovery, with fair use of the limb. At my suggestion, there was a continuous employment of cold water in the manner to which I have referred.

I have the honour to be, Sir, your obedient servant,

FREDERICK ROBINSON,
Surgeon-Major of the Scots Guards.

Claverton-terrace, St. George's-road.

THE LYMPHATICS IN LEPROSY.

To the Editor of THE LANCET.

SIR,—Reverting to the Report of the Pathological Society in THE LANCET, dated 9th ultimo, I request permission to state that my preparations of the morbid anatomy of leprosy were all made from specimens taken either during life or within a few hours of death; immediately placed in spirit, and, on section, treated with acetic acid or liquor potassæ (glycerine being sometimes used, and carmine for staining), which simple reagents proved sufficient, and were perhaps best suited for the examination of delicate structures not separable from inflammatory or degenerated products. Bits of skin and recent nodules of fresh and acute leprous eruptions were cut out of the living subjects, and treated as above; the peripheral cutaneous nerve-filaments were occasionally secured three or four hours after death; and, besides, the more chronic skin-eruption and long-affected nerves were many times submitted to scrutiny, the result being an evident discrimination between the earliest and the later stages of leprous disease, which has to be borne in mind. The appearance of shrunken red corpuscles and diffused or granular pigment in or around the bloodvessels of atrophied skin, once the seat of nodule or spot, is quite familiar to me; but I do not regard it as peculiar, having found the same in old syphilitic patches. If there exist special infecting particles, they obviously should be looked for in places where and at times when the morbid processes are freshest or most active, and may even then escape detection on some occasions. Dr. Hoggan's communication under reference is an interesting one; and I would commend to particular attention the state of the inguinal and axillary lymphatic glands, because these organs have been found to be specifically altered in leprosies, and traces of the morbid changes may be detected sometimes in long-affected subjects, after death.

I am, Sir, your obedient servant,

Bombay, 14th December, 1878. H. V. CARTER.

ANTHROPOMETRY.

To the Editor of THE LANCET.

SIR,—In reference to the notice of my "Manual of Anthropometry" in last week's LANCET, I shall be obliged if you will allow me to state that, knowing how little justice I had done to the labours of the late M. Quetelet, I offered, three or four weeks ago, a translation of the *Anthropométrie* (in the preparation of which I had been assisted by an experienced translator) to the New Sydenham Society, for publication; and though I fear there is little chance of its being accepted, as Mr. Hutchinson informs me that the Society keeps strictly to medical and surgical subjects, my offer shows that I had no intention of appropriating either the words or the facts of the work without acknowledgment.

In the interests of anthropometry as a science, I would also beg to call attention to the following statement, made at page 182 of the *Anthropométrie*, and published in a note at page 20 in my article in the St. George's Hospital Reports:—"Having only been able to collect my numbers from individuals regularly formed (*régulièrement construits*), and, on the other hand, the number of persons observed being small (*peu considérable*), the differences between the maxima and minima numbers are very slight (Quetelet's table gives only 10·15 inches, where mine give 24 inches); but it should be remembered that I did not possess the means to give to science more developed numbers, since she did not furnish me with the necessary data to enable me to compare them." It was this sentence which first directed my attention to the study of anthropometry; and I think that my original observations, which appear to have escaped the notice of the reviewer, justify the very modest criticism I ventured to make on M. Quetelet's work: "While accepting M. Quetelet's method of studying the proportions of the body as the best, and indeed the only scientific method yet propounded, we cannot accept his tables with equal confidence, as they are based on too small a number of observations." I may also add, that from my experience it is quite impossible to obtain a reliable *mean* from ten, or even thirty

observations; nor can we, in any number, however great, distinguish a *mean* by such small measurements as the millimetres which appear in all M. Quetelet's results, and prove them to be *averages*.

Your obedient servant,

Bolton-row, Jan. 8th, 1879. CHARLES ROBERTS.

THE NAVAL MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—At the beginning of a new year we, in common with other classes of the community, look forward to some, if only a limited amount of, prosperity; and I desire to transmit to you for publication some few remarks on the points connected with the at present unpopular service of ours.

First, as to *status*. Much has been granted of late; all grades have been advanced, especially the juniors and seniors. The surgeon entering now takes rank and all its attendant advantages with a lieutenant, R.N., and has a uniform denoting such rank, leaving him, as is the case with every one in the service, to take his promotion on his own merits. If an accomplished and amiable gentleman, he will find no difficulty in holding as good a position as any officer in the ship to which he may belong. Worth is soon found out, whether as an executive officer or not, and a man is esteemed accordingly. Perhaps quite as much as in civil life is the careful, well-read, and accomplished medical man appreciated. It cannot be forgotten that a large portion of the executive branch come from a class who would never think of making their sons medical men, and a few of these, *foolishly* looking on themselves as belonging to the "blue blood," or "Royal" line, are liable on occasions to show a little self-assertion on that account; but the instances are few. As a general rule, the more really well-connected gentleman never does so. If any, on the debatable land of his family connexions, should do so, the remedy is very easy, requiring no pointing out. And in civil life similar conduct is, I believe, as commonly found. The young medical officer should, in such a case, not be too thin-skinned on the subject, but prove by his own thoroughly gentlemanly behaviour that, although not heir to a title, he can lay good claim to the title of gentleman; and I should venture unhesitatingly to assert that before the end of the commission he would be beloved and respected by all on board, while the foibles of the other would either have disappeared or only remain to be smiled at. There is no doubt that in both the services there is some amount of class feeling. It exists everywhere in society. Medical men generally prefer the society of medical men, and it is not to be wondered at if captains prefer the society of captains; but there is no man on board ship who is more generally the companion of the captain (off duty) than the medical officer—a position in which, if he is a judicious, enlightened man, may prove of inestimable benefit to all on board.

Second, as to *pay*. Of late years the pay has been so far advanced as to leave little complaint, a young man entering the service receiving a sufficient sum not only to meet any necessary expense in a well-conducted mess, to keep up his stock of uniform, &c., to visit and enjoy the pleasure of seeing many places his ship may call at, places not to be seen by civilians except at considerable expense, but even to lay by a little yearly for future use. In comparing the Army with the Navy Medical Service in that respect, it is to be borne in mind that, as a rule, expenses in the army are much greater than in the navy. Messes are more expensive in the former, calls on the purse more frequent for the multifarious items that, whilst, perhaps, giving some enjoyment, leave very little to the credit side of the banker's account at the end of the year.

As many of the grievances of which we have heard so much appear to emanate from these two points, I give the above as the results of many years' experience in the service, a service which, although my promotion has not been specially rapid, I have never regretted entering, and I take leave to doubt still whether, for an average man with no private resources, any much better means of livelihood can, even in this nineteenth century, be found.

I remain, Sir, your obedient servant,

Jan. 4th, 1879. FLEET-SURGEON, R.N.

THE ROYAL COLLEGE OF SURGEONS.

AT a quarterly meeting of the Council of the Royal College of Surgeons held on Thursday last, the President moved, and Mr. Hancock seconded, that an address of condolence be presented to Her Majesty on the death of the Grand Duchess of Hesse, Princess Alice. A list of deceased members of the College, sixty-four in number, was read. The report of the Museum Committee was presented, and the first part of the Catalogue was ordered to be printed. The President announced that Parliament will, during the ensuing session, introduce a Medical Bill, probably similar to the last. The Conjoint Scheme was accepted by the Council, provided the interests of the College be duly considered, and that the other examining boards accepted similar conditions. It was resolved that a committee of past presidents, with the President and Vice-Presidents, be appointed to watch over the interests of the College during the passing of the Medical Bill.

Obituary.

HENRY MAPLETON, M.D., F.R.C.P.

DR. HENRY MAPLETON, whose death occurred on the 1st January, was the second son of Commander Mapleton, R.N., and was born in Devonshire in 1815. On leaving school at Tiverton, he began his professional education at Exeter. He then went to Edinburgh, where, after going through the full medical course at the University, he graduated in 1838. He had previously obtained his diploma as surgeon in London. In 1839 he joined the Army as assistant-surgeon on the staff, and at the end of the same year was gazetted to the 62nd Regiment, and proceeded to Madras in the spring of 1840. He was transferred to the 40th Regiment, and served with it in the Gwalior campaign in 1843, being present at the battle of Maharajpore, for which he received the bronze star. In 1846 he was appointed to the 3rd Dragoon Guards, and in the following year was promoted to the surgeoncy of the 40th Regiment. In 1850 he was transferred to the 3rd Dragoon Guards, and in 1854 was selected to accompany Lord Raglan to Turkey, as surgeon on his personal staff, in which capacity he continued to serve till that lamented officer's death, when he returned home. In 1855 he was gazetted to the surgeoncy of the 15th Hussars, and in 1858 was transferred to the 18th Hussars, which was then just raised. On the reorganisation of the Army Medical Department, he was selected to fill the appointment of head of the Medical Branch, and was shortly after promoted to the rank of Deputy Inspector-General. As head of the Medical Branch, it became his duty to superintend the equipment of the two hospital steam-ships, *Mauritius* and *Melbourne*, for service in China, which he did in a manner that gave most perfect satisfaction. The value of these hospital-ships was most fully acknowledged, and a detailed account of the fittings and equipment was given in the Army Medical Department Reports. In 1864, Dr. Mapleton, on the completion of four years as head of the Medical Branch, retired from the service with the rank of Inspector-General. He spent the last years of his life in the neighbourhood of Exeter. In all the regiments in which he served he was deservedly beloved alike by officers and men. As head of the Medical Branch he was very popular, particularly with the younger officers, and his retirement was generally regretted. He was of a cheerful and kindly disposition, and was always ready to help, as far as he could, anyone who required his assistance.

THE Reigning Princess of Bucharest has conferred upon Mrs. Emma B. A. Mawer the honour of the "Elizabeth Cross," in consideration of the aid she rendered to the sick and wounded Roumanian soldiers during the late war. This decoration was created by the Princess, and has been sent to the Empresses of Russia, Austria, and Germany, the Queen of Wurtemberg, and other illustrious ladies.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination in Anatomy and Physiology at a meeting of the Board of Examiners on Wednesday last:—

Robert W. Hormaydje, St. Mary's Hospital; Thos. W. Aird, Dublin; Charles E. Brunton, Cambridge; T. A. Jordan Shepherd, Herbert G. Stacey, and James C. Pincott, Guy's Hospital; Simpson Powell and Ranald W. E. H. Nicholson, King's College; Geo. A. Branson, Alfred G. Chitty, and Herbert Faulkner, University College; John R. Seymour, London Hospital; Francis E. Allen, St. Bartholomew's Hospital and Bristol; Henry S. Smith, Bristol.

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on Jan. 2nd:—

Dixon, Francis, Eastwood, Nottingham.
Martland, Edward William, Standish, near Wigan.
Parke, Thomas Henry, Tideswell, Sheffield.
Redmond, John, Grange Loughall, Ireland.
Webb, Charles Alfred, Brompton-square.

The following gentlemen on the same day passed the Primary Professional Examination:—

Gabriel Sukias Dobraishiam, London Hospital; Norman Edward Johnson Gaylor, Guy's Hospital.

VACCINATION GRANT.—Mr. John Revett Clouting, of Thetford, Norfolk, has received a grant of £11 4*s.* for efficient vaccination in his district.

DR. HENRY SEARLE GAYE, Deputy Coroner, is a candidate for the Coronership of the Totnes District of the county of Devon, vacant by the resignation of Mr. Henry Michelmore.

MR. WILLIAM H. HARSANT, F.R.C.S. Eng., has been presented with a very handsome clock and an inkstand by the officers, students, nurses, and servants of the Bristol General Hospital, on his resigning as house-surgeon.

THE deaths registered in London last week numbered 1900, and included 13 from small-pox, 34 from measles, 29 from scarlet fever, 16 from diphtheria, 65 from whooping-cough, 37 from different forms of fever, and 9 from diarrhœa. Diseases of the respiratory organs were less fatal last week than for some weeks past, 555 deaths being classed under this heading in the latest return.

SOCIETY OF PUBLIC ANALYSTS.—The annual meeting of this Society will be held at Burlington House, Piccadilly, on the 15th instant, at 5 o'clock, when the election of President, Vice-presidents, and other members of Council for the present year will take place. The following papers will also be read:—"On the Determination of Phosphoric Acid as Phospho-molybdate," by O. Hehner, F.C.S. "On the Influence of the Decomposition in Butters from age on the Specific Gravity of the Fat and the percentage of soluble and insoluble Acids," by E. W. T. Jones, F.C.S. The annual dinner will afterwards be held at the "Café Royal," Regent-street.

Medical Appointments.

BARNES, Dr. F., has been appointed Assistant-Physician to the Royal Maternity Charity.

BATES, W., M.R.C.S.E., L.S.A.L., has been appointed an Acting Medical Officer to the West Birmingham Provident Dispensary.

BRACEY, H. R., M.R.C.S.E., L.S.A.L., has been appointed an Acting Medical Officer to the West Birmingham Provident Dispensary.

BRADLEY, J. P., L.F.P.S.G., L.S.A.L., has been appointed an Acting Medical Officer to the West Birmingham Provident Dispensary.

BRIDGES, A. C., L.S.A.L., has been appointed Assistant House-Surgeon to the Cumberland Infirmary, vice Pidcock, resigned.

BROWN, G. J., M.R.C.S.E., has been appointed an Acting Medical Officer to the West Birmingham Provident Dispensary.

CAITHNESS, J., M.D., has been appointed Deputy Coroner for the County of Denbigh.

CROSS, F. R., F.R.C.S.E., has been appointed a Surgeon to the Royal Infirmary, Bristol, vice Tibbits, deceased.

DARWEN, J., M.R.C.S.E., L.S.A.L., has been appointed an Acting Medical Officer to the West Birmingham Provident Dispensary.

DENNE, H., M.D., has been appointed an Acting Medical Officer to the West Birmingham Provident Dispensary.

EDGINTON, R. W., M.D., has been appointed an Acting Medical Officer to the West Birmingham Provident Dispensary.

GIBBS, E., M.R.C.S.E., has been appointed an Acting Medical Officer to the West Birmingham Provident Dispensary.

HARSANT, W. H., F.R.C.S.E., L.S.A.L., has been appointed Assistant-Surgeon to the Royal Infirmary, Bristol, vice Cross, resigned.

HINDS, W., M.D., has been appointed an Acting Medical Officer to the West Birmingham Provident Dispensary.

HOPE, W. M., M.R.C.S., L.S.A.L., has been appointed House-Surgeon and Secretary to the Stamford, Rutland, and General Infirmary.

JONES, J. F., M.R.C.S.E., has been appointed an Acting Medical Officer to the West Birmingham Provident Dispensary.

LIMRICK, W. S., L.R.C.P.Ed., has been reappointed Medical Officer of Health for the Waterloo Urban Sanitary District, Lancashire, for one year.

MORGAN, W., Ph.D., has been appointed Public Analyst for the County of Pembroke, at £5 5*s.* per annum and 15*s.* per analysis.

MOYLES, T., M.D., has been appointed an Acting Medical Officer to the West Birmingham Provident Dispensary.

POTTS, E., M.R.C.S.E., L.S.A.L., has been appointed an Acting Medical Officer to the West Birmingham Provident Dispensary.

SMITH, G., M.R.C.S.E., has been appointed an Acting Medical Officer to the West Birmingham Provident Dispensary.

SMITH, J. G., M.B., C.M., has been appointed a Surgeon to the Royal Infirmary, Bristol, vice Steele, resigned.

STODDART, W. W., F.C.S., has been reappointed Public Analyst for Somersetshire, at £200 per annum.

Births, Marriages, and Deaths.

BIRTHS.

NICHOLSON.—On the 4th inst., at White Ladies'-road, Clifton, the wife of Thomas Dickinson Nicholson, M.D., of a daughter.

SMITH.—On the 1st inst., at London-road, Croydon, the wife of Walter H. M. Smith, L.R.C.P.Ed., of a son.

WIGLESWORTH.—On the 4th inst., at Brougham-terrace, Liverpool, the wife of Arthur Wigleworth, L.R.C.P.L., of a son.

WILKINSON.—On the 2nd inst., at Ashford, Kent, the wife of John Cooper Wilkinson, M.R.C.S.E., of a son.

WYKE-SMITH.—On the 5th inst., at Wimborne, the wife of Walter Wyke-Smith, L.R.C.P.Ed., of a son.

MARRIAGES.

GOSS—WEBBER.—On the 1st inst., at the Parish Church, Sidmouth, Samuel Goss, M.R.C.S.E., to Annie Elizabeth, daughter of J. B. P. Webber, Esq.

JOHNSTON—STAPLETON.—On the 2nd inst., at Castleblayney Church, Henry Maturin Johnston, M.D., to Meilicent Agnes Blennerhassett, daughter of the late D. Stapleton, Esq.

STEWART—MADDOX.—On the 7th inst., at St. Matthew's, Oakley-square, by the Rev. A. H. Bean, M.A., Dr. Howard Douglas Stewart (of King's College Hospital), youngest son of Alexander Hamilton Dundas Stewart (late Royal Horse Guards), to Helen Clara Alison, eldest daughter of John Maddox, Esq.

DEATHS.

BARRON.—On the 25th ult., suddenly, at St. John's, Woking, Edward Enfield Barron, Esq., M.D. Lond., late of St. Thomas's-street, Southwark, aged 67.

BARRY.—On the 30th ult., at Mallow, co. Cork, Phillip Barry, M.D.

BLACK.—On the 2nd inst., at Donegal House, Green Lanes, Stoke Newington, Robert John Black, M.D., aged 50.

BLACKENEY.—On the 3rd inst., at Chester-street, Birkenhead, William Purdon Blakeney, L.F.P.S.G., aged 47.

DIXON.—On the 31st ult., George Dixon, M.D., M.R.C.S.E., of Penrith (late of Thames Ditton, Surrey), aged 38.

GOOD.—On the 29th ult., at Launceston, Thomas Good, M.R.C.S.E., aged 74.

SAXTON.—On the 6th inst., at Berkeley-gardens, Kensington, William Waring Saxton, L.R.C.P.Ed.

STILWELL.—On the 5th inst., at Epsom, George Stilwell, M.R.C.S.E., aged 73.

WALKER.—On the 29th ult., at Hampton-terrace, Whalley Range, Manchester, John Walker, B.A., M.B. Dub., L.R.C.S.I., of typhoid fever, after a week's illness, aged 30.

N.B.—*A fee of 5*s. *is charged for the insertion of Notices of Births, Marriages and Deaths.*

BOOKS ETC. RECEIVED.

Report of the Chemical Analyser to the Government of Bombay for the Years 1877-8.
F. Guthrie on Practical Physics.
St. Bartholomew's Hospital Reports. Vol. XIV. 1878.
The Family Physician.
W. Crookes on the Illumination of Lines of Molecular Pressure.
Dr. V. Chalot: Comparer entre eux les Divers Moyens de Diérèse.
Dr. Jacques-François Farina: Le Climat de Menton, son Influence sur le Traitement de la Phthisie Pulmonaire.
A. Semple: Aids to Therapeutics.
Dr. G. Timms: Alcohol in some Clinical Aspects—a Remedy; a Poison.
C. E. A. Semple: Outlines of Medicine.
Dr. C. H. F. Routh: The Moral and Physical Evils likely to follow if Practices intended to act as Checks to Population be not strongly Discouraged and Condemned.
The New Sydenham Society's Lexicon of Terms Used in Medicine and the Allied Sciences. Part I.
Journal des Sciences Médicales de Lille. January.
The Quarterly Journal of Inebriety. December.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Jan. 9th, 1879.

Dates.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb	Dry Bulb	Solar Radiation in Vacuo	Max. Temp in Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Jan. 3	29·36	S.E.	41	41	..	45	31	0·56	Raining
,, 4	29·70	N.W.	..	33	..	40	31	0·12	Foggy
,, 5	30·08	N.W.	..	33	..	38	28	..	Bright
,, 6	30·28	N.W.	..	27	..	35	24	..	Overcast
,, 7	30·10	N.W.	33	34	..	35	25	..	Foggy
,, 8	29·58	S.E.	..	30	..	35	26	..	Overcast
,, 9	30·09	S.E.	..	34	..	36	26	..	Overcast

Notes, Short Comments, and Answers to Correspondents.

RECENT CASES OF TYPHUS IN LONDON.

DETAILS concerning a recent outbreak of typhus reach us from the district of St. Saviour's, Blackfriars, and are instructive as further demonstrating—firstly, the efficacy of thorough disinfection; and secondly, the need of caution in washing infected linen. We learn from the medical officer of health, Dr. Bianchi, that he was called to attend a family, consisting of father, mother, son, and daughter, who were all suffering from typhus, and lived in one of the most crowded courts of his district. With commendable energy, he not only ordered the immediate removal of the patients to the Fever Hospital, but caused the whole of the furniture in the place to be at once burnt or thoroughly destroyed. The room was then fumigated, the paper torn from the walls, &c., and, in fact, the most rigorous measures were taken to ensure perfect purification. The houses here are situated back to back; nearly every room is inhabited by a separate family, and these generally belong to the lowest Irish population; there are, in a word, all the elements necessary to facilitate the spread of an epidemic; yet no other case has been reported. That the outbreak was severe may be judged from the fact that three out of the four patients died between the 25th of November, when the disease first declared itself, and the ensuing 8th of December. Since that date some efforts were made to trace out the origin of the fever. The family were unknown in Blackfriars, having just arrived from the Borough. Here, however, it was discovered that the mother had, shortly before leaving, washed the linen belonging to a child whose parents had just been removed to the Stockwell Hospital, sick with typhus fever. To this we need only add that it was the mother who was the first to fall ill, and the cause of the fever was tolerably evident.

Mr. W. L. Rowlatt.—We are not acquainted with the work named.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

To the Editor of THE LANCET.

SIR,—I beg to forward you a copy of the resolution unanimously adopted at a meeting of the Council of this Association held last evening, and respectfully to request its publication in your journal.

I am, Sir, yours respectfully,

J. WICKHAM BARNES, Hon. Sec.

Bolt-court, Fleet-street, Jan. 8th, 1879.

3, Bolt-court, Fleet-street.

That this Council having read the letter from the Local Government Board to Mr. Fenton, in which the Board, after making several *ex-parte* statements against that gentleman, call on him to resign his appointment, and having had an opportunity of hearing Mr. Fenton's explanation thereon, begs to express its regret that the Local Government Board should have been so ill-advised as to adopt the extreme measure of compelling his resignation, solely, as it appears, to gratify the hostility of the Saint George's Board of Guardians.

The Council also holds that as the principal allegation on which the guardians based their opposition to Mr. Fenton arose from that gentleman persistently recommending nourishment for the sick poor he was required to attend through an order from the relieving officer, and which extras that official, in deference to the harshly repressive views of the St. George's Board of Guardians, persistently refused to supply, on the assumption that such sick poor persons were in a condition to provide the same; and as such refusal to supply needful food and stimulants to persons whose impecuniosity has been admitted by the grant of a medical relief order is calculated seriously to retard their recovery or to hasten death, and as it has come to the knowledge of the Council that refusals to supply food and stimulants, recommended by medical officers, are continually disregarded in other Poor-law unions, desires to put on record their feeling that the respective relations between district medical officers and relieving officers require to be more accurately defined, if medical officers are not to be retarded in their desire to do their duty to the sick poor put under their charge.

Mr. John Hopkins.—If our correspondent will refer to the 121st section of the Public Health Act, 1875, the powers of the local authority as to infection will be found fully set forth.

STIMULANTS IN WORKHOUSES.

'ELFIN," a judicious weekly summary writer in the *Newcastle Chronicle*, comments on the fact that "they have got the drink question settled at the Durham Workhouse, by giving the surgeon power to order alcoholic stimulants when he thinks them necessary, and by returning half a barrel of beer presented to the inmates by the Mayor." "Elfin" justly says that the power of dispensing the spirits should never have been taken from the surgeon. We are amazed that any guardians should be so intemperate as to assume the responsibility of taking such a power from the surgeon. More than this, we entirely deny their right to do so. They do so only at the risk of having very serious charges substantiated against them. This intemperance of temperance in individuals and in bodies does more harm than good. We should advise all medical officers of workhouse—not, of course, to order alcohol unnecessarily or thoughtlessly,—but where they think it necessary, to do so in entire disregard of such unwarrantable interference with the duties of the medical officer.

E. A. B.—Thanks. We will not lose sight of the subject.

TREATMENT OF DIPHTHERIA.

To the Editor of THE LANCET.

SIR,—The subject of diphtheria being unhappily uppermost in the minds of men at the present time, I have read with great interest the letter, signed "C. R.," in THE LANCET of Dec. 28th, recording the treatment so successfully pursued at the Princess Mary's Homes. Every word therein contained I can fully endorse. Iron is the great sheet-anchor, not only in all diphtheritic affections, but likewise in erysipelas, scarlet fever, and cynanche tonsillaris, possibly—nay, probably—allied diseases. It acts, I believe, as specifically in all the diseases named as does quinine in ague, grappling, if I may use the expression, with the deadly poisons, and overcoming them. I invariably use the tincture of the sesquichloride of the old Pharmacopœia in preference to the perchloride of the British Pharmacopœia, and I as invariably combine it with chlorate of potash and Duncan Flockhart's chloric ether, which is in every way superior to the sp. chloroformi, B.P. Elimination need not be lost sight of; but simply trusting to elimination in severe cases means death, time not admitting of it. The poison must be combated and rendered innocuous, and this, I repeat, I believe iron will do. How it acts I am not at present prepared to say; but, after an experience of twenty years at home and abroad, I have no hesitation in speaking dictatorially, never having had the misfortune to see a case so treated go wrongly. I am also of opinion that in all the diseases before named, mercurials should be strictly avoided. If an emetic at the outset, with the object of elimination, be deemed desirable, there is nothing better than ipecacuanha powder, with an equal quantity of sesquicarbonate of ammonia; and as an aperient, I prefer the old-fashioned hydragogue cathartic, so well known under the name of compound jalap powder, to any other. Alcohol, pure and simple, should be avoided if possible; but good port wine may be exhibited with great benefit. Brand's essence, with cream, milk, and eggs, will generally be found sufficient in the shape of nourishment. Irritating local applications, in my opinion, do more harm than good. The inhalation of steam, medicated with permanganate of potash, gives great relief. For thirst, nothing is better than the chlorine drink, flavoured with lemon and a little syrup, of which the patient may partake freely. With these remedies I approach a case of diphtheria with happy confidence.

Your obedient servant,

J. ABERNETHY HICKS,
Civil Surgeon in Charge of H.M.'s Military Hospital, Eastbourne.

Eastbourne, Dec. 30th, 1878.

To the Editor of THE LANCET.

SIR,—I am anxious, if you will allow me, to say a few words respecting diphtheria. Probably the treatment I am going to mention may be well known to, and used by, many of my medical brethren; but, if you will allow me the space, my telling my experience can do no harm.

About fifteen or twenty years ago an outbreak of diphtheria, the first I had seen, occurred in my neighbourhood. I then used chiefly the remedy most recommended at the time, the tincture of muriate of iron; but although in some cases it seemed to do good, in many others it failed altogether. I lost many cases, in two or three instances three or four in one house; it was very painful to me, and I dreaded being called to cases over which I seemed to have no control.

About three months ago, while in a large village about seven miles from my residence, I was asked to see a lad about twelve years old. I had not seen or heard of diphtheria in the neighbourhood. I found him with the tonsils and uvula covered with the white membrane, and his breathing most difficult, for it had invaded the larynx. He died in about eight hours. Since that time there have been numerous cases in the same village, amongst them four of the brothers and sisters of the lad I have named. In every case I have given chlorine at once, and in every case it has stopped the disease. I have not lost another patient, and the people in the village have such faith in the power of the remedy that, when a fresh case has occurred, they do not send for me to go, but "to send them some of the throat medicine, and to call when I am next in ——."

I believe that if given as soon as the white deposit appears on the uvula or tonsils it is a certain cure; but I have had several cases where the disease had proceeded further, and covered both tonsils and uvula, and it has been successful.

I enclose my card, and am, Sir, your obedient servant,

January, 1879. A COUNTRY SURGEON.

Mr. George Ward is thanked; but we consider dental surgery an integral part of general surgery, and work alone for qualified surgeons.

Enquirer.—We must decline to name any physician.

THE USE OF BORAX IN PRESERVING MEAT.

M. T. LE BON puts forward the following facts concerning the above subject:—Meat, he states, plunged into a borax solution, or covered with powdered borax, for a few hours, preserves its qualities unaltered for a long period; but when used for food after remaining in the solution or powder for several weeks, it produces severe intestinal disturbances. Borax when taken in small and repeated doses, as it is in meat so preserved, produces toxic effects, and therefore the process ought to be severely proscribed. He then points to the fact that several American Companies have given up this process.

A Sufferer.—Any respectable surgeon is competent to treat the case, and may be consulted with every confidence. Avoid advertisers.

Mr. Baird.—We have no recollection of the matter.

TRAFFIC IN DIPLOMAS.

To the Editor of THE LANCET.

SIR,—Having a short time ago heard that a Dr. * * * * * * * * * * * * * * * * *, London, offered diplomas of Doctorship of our University, we feel bound to prevent by all means such an abuse. Nobody being authorised to offer diplomas of our University, we can call all such advertisements an illegal and unwarrantable proceeding. The academical degrees are only to be acquired here by presenting a correct scientific dissertation, and by passing an examination in the German language. The notice of the above-mentioned advertisement was announced to us by Mr. B. Templar, F.R.A.S., Holly-bank School, Southport, England.

The aim of this denegation is to request you to publish it in THE LANCET. I am, Sir, very truly yours,

PROF. DR. ZWEIFEL,
Dean of the Faculty of Medicine at the
Erlangen, Dec. 28th, 1878. University of Erlangen, Germany.

M.D., L.R.C.P.—There is no rule for the guidance of a general practitioner in making such a charge. He himself is the best judge, and he should act on his own sense of what is at once just and dignified. He should certainly not be called on to leave his practice for a night to take part in a consultation, and make several long journeys, without something like a consultant's reward.

THE SUDDEN DISCONTINUANCE OF HYPODERMIC INJECTIONS OF MORPHIA AFTER PROTRACTED USE.

To the Editor of THE LANCET.

SIR,—Dr. Braithwaite's case, published in your journal of Dec. 21st, on this subject, opens a discussion of much interest to medical men. The following one shows that, even where twenty grains daily have been injected, the habit may be safely and suddenly broken off.

A lady, aged about thirty-two, was admitted into Mrs. Theobald's establishment, Leicester, in August, 1877. She was brought by her husband (who is connected with the profession), and was suffering from the joint effects of morphia injections and chronic alcoholism. Her condition was very deplorable: she was greatly emaciated; her countenance was sallow, dirty, and blotchy, and, though able to get about, she was tremulous and weak. She complained also of suffering from intense neuralgic headaches, from which she was never free for long unless her usual injections of morphia were made. She had been taking or injecting morphia seven years, the last five being given to the injections, and the frequency and dose had been increasing as time went on. She brought a large bottle of morphia solution with her of definite strength and a hypodermic syringe, and was in the habit of injecting herself several times daily. Her limbs showed abundant evidence of where the injections had been made. At the time of admission she was injecting twenty grains a day. This I satisfactorily ascertained to be a fact, not only from the strength of the solution and the quantity used, but also from her own testimony. During the five years previous to admission the catamenia had never appeared. She was most anxious to be better, but was most persistent in her ideas that both habits of morphia and drink ought to be broken off by degrees. Having been persuaded to come under certain promises, she positively refused at first giving up the syringe and solution, though she had no alternative respecting the drink, which Mrs. Theobald never allows in her establishment—a course which I most strenuously support. After a week's sojourn, finding we were making no progress, I insisted on my own views being absolutely carried out: that the lady should be put to bed for a time; that the syringe and solution should be given to the ladies' attendant, and the most careful and assiduous nursing should be adopted. Medically, alkalies and the bromides were given, with tincture of hyoscyamus and compound spirit of ammonia at bedtime. A few stormy days followed, the patient being rebellious, and loading me with invective at each visit, asserting her increasing pain and exhaustion through want of sleep. Vomiting and other complications were also present, though in this case but little diarrhœa. However, in four or five days the weaning was complete; a little later the patient became agreeable and conscious of her own improvement, and in about a fortnight she was getting up again. She now rapidly regained health and strength. In a few weeks the catamenia returned slightly, improving at each subsequent period, and finally the lady became a most assiduous nursing attendant on all fresh patients admitted for treatment. After ten months she left in the best of health, and now, six months later, she reports herself free from any desire to resume old habits, and is, besides, *enceinte*.

My own experience in the case of opium or chlorodyne takers admitted under my care, both in Mrs. Theobald's institution and in infirmary practice, bears me out in saying that it is far better and kinder to break the habit once and for all, trusting to such a plan as described, than to give it up by degrees. Weaning is effected in a few days; the patient becomes more manageable, and the natural functions become more normally performed. Mrs. Theobald's long experience, before my attendance there, in the treatment of confirmed inebriates, is precisely the same. She has adopted the plan for fifteen years with the greatest success, and during that time not a death has occurred under her care. Indeed the rule is for immediate improvement in health and appearance from the very day that the stimulants are dispensed with. I believe delirium tremens never of itself follows the simple cutting off of stimulants. When it occurs then, it is the result of the previous saturation of the system by alcohol.

In conclusion, the questions arise—Are medical men justified in teaching patients to perform hypodermic injections on themselves? Is not hypodermic injection often resorted to when other remedies would answer equally well? And, in the matter of chloral draughts, should not more caution be used by the profession than is now done in supplying patients with prescriptions which they get made up just when they like. Yours faithfully,

Leicester, Dec. 1878. J. ST. T. CLARKE, M.B. Lond., &c.

To the Editor of THE LANCET.

SIR,—In your issue of Dec. 21st, Dr. Braithwaite describes the effect of sudden abstention from morphia in the person of a lady long accustomed to its abuse, and believes that his experience is unique. The peculiarity of the case lies chiefly in the patient's tenacity of purpose, which enabled her to withstand the readministration of the drug, even when urged to resort to it by Dr. Braithwaite on the ninth day of the crisis which followed its cessation. In other respects, although interesting, there is nothing new in Dr. Braithwaite's relation. Similar cases occur by the score: the symptoms are well known, and may be predicted with confidence under the same circumstances. Dr. E. Levenstein has published his observations on this subject in the *Berlin Klinischer Wochenschrift*, and they have been translated and reproduced by the *Journal de Médecine de Bruxelles*, and again in Bouchardat's *Annuaire* for 1877. Three cases are here described, and briefly they are as follows.

In July, 1875, two patients, husband and wife, were sent to Dr. Levenstein's establishment by Westphal. The man had been injecting to relieve pain for ten years, during the last five of which his daily quantum was one gramme. His wife had first used the syringe as a remedy for hepatic colic; but during the war of 1870-71, in which many of her relatives were engaged, she learned this means of procuring forgetfulness and drowning care. When she came under treatment her dose was eighty centigrammes in the twenty-four hours. The general condition of these patients is described in the periodical referred to, and also in THE LANCET for 1876 (vol. i., page 578). It is interesting to note that, whilst in the woman the pupil was minutely contracted, the man was the subject of mydriasis, a condition seen in extreme cases of acute opium poisoning. "I immediately suppressed," says Dr. Levenstein, "all administration of morphia for the husband; but for the wife I ordered a progressive diminution of the daily dose, so as to obtain its complete suppression in two weeks." The first day the man was excitable and restless; on the second, diarrhœa set in, and lasted fourteen days, during which time there was occasionally sickness. Through the night there was insomnia and excitement, which was succeeded by depression in the daytime. At the end of the second week the influence of the suppression of the drug on the *morale* and the *physique* of the patient had disappeared; all that remained was hyperæsthesia. The temperature was normal throughout. At the end of a month 2500 grammes had been gained in weight. In the case of the woman, where the morphia was diminished progressively, there was at first increase of reflex sensibility, with malaise and weakness; neuralgic pains supervened, and, when five centigrammes were reached (from eighty), diarrhœa occurred, and was accompanied by anxiety, vertigo, palpitations, and flushings. In spite of the patient's solicitations, the dose was still diminished, and at the end of a month she left the establishment in good spirits, and a gainer by weight of 2000 grammes.

The third case related is that of a man who accustomed himself to inject over a gramme daily, and who entered the establishment to rid himself of the habit. Sudden complete suppression was adopted. The following day sickness and diarrhœa set in, and lasted eight and nine days respectively. For five days the patient did not sleep an instant, and was tormented by hallucinations. The limbs were contracted convulsively, and speech was extremely difficult. On the eighth day the respiration became suddenly slow, laboured, and noisy, and the face hippocratic. At the expiration of half an hour the breathing improved, but the patient remained in a state of collapse. The sixth day half an hour's sleep; the seventh, after a bath, he slept two hours and a half. On the eighth day the appetite returned, and the sickness ceased. From the ninth day there was no other symptom than insomnia, and the patient did not wish for any morphia.

Dr. Levenstein finds that scarcely 25 per cent. of these cases (hypodermic morphinism) are cured. Two of his patients died of marasmus, two committed suicide, and five adopted alcoholic intoxication as an antidote.

Sudden suppression is the better treatment, and if the physician be seconded by his subordinates the critical period is usually over in eight days. Should no diarrhœa supervene, and the patient remain comfortable, it is certain that a secret supply exists. The diarrhœa should not be checked unless there is imminent danger of exhaustion, but it gives way readily to the injection of one to three litres of blood-warm water into the rectum thrice daily. In the event of life being endangered, liquor ammoniæ should be used hypodermically, and then perhaps a small quantity of morphia to satisfy the vital indication.

I am not aware that all the foregoing details have already been published in England; but an excellent article on the subject appeared in THE LANCET for 1876, and should be consulted by those about to adopt this plan. Yours truly,

Paris, Dec. 1878. OSCAR JENNINGS, M.D.

THE following are names of contributors to our columns during the present year in addition to those already published :—

Dr. T. WEMYSS BOGG, St. Leonards.

Dr. HENRY HUMPHREYS, Physician to the Children's Hospital, Pendlebury.

Dr. G. LICHTENBERG, Surgeon to the German Hospital.

Mr. H. SAWYER, F.R.C.S., House-Surgeon to the Darlington Hospital.

Mr. John J. Bingham.—We agree with our correspondent in his views of the treatment proper in the case he describes, especially in these days when catheters are so exquisitely adapted to sensitive urethræ. It is right, however, when we see reason to disapprove strongly of the treatment of a professional brother, to make our complaints in the first instance to him.

C. F. W. should consult his medical attendant.

FATAL HÆMORRHAGE FROM VAGINA.

To the Editor of THE LANCET.

SIR,—On the 26th December, 1878, I was called to see Emma B——, aged twenty-one, a domestic servant, residing at Clapham ; and as the case is one that may interest your readers from a medico-legal point, I think it well to introduce it to notice.

The history is, that on the 24th December the servant was found seated upon the chamber, moaning, and passing a large quantity of blood. It was known that she was pregnant. No medical man saw her, although I understand Dr. —— was applied to by the master, who, upon the information supplied, suggested that it was not unusual for hæmorrhage to occur at frequent intervals throughout a pregnancy, and he did not think it requisite to attend. I again state that he acted only upon information, and I accept only an *ex-parte* statement. The mother-in-law of the servant was applied to on the morning of Christmas-day, as the master and mistress would leave home until the following day. It was not wished that the servant should be alone. When the mother-in-law arrived, hæmorrhage had ceased, and it was only just referred to. It appears that the servant and mother-in-law sat up until four o'clock in the morning of the 25th, singing, drinking, &c. The servant went to bed after this, and the mother-in-law sat by the bedside, and remained in the house until eight in the morning, leaving the servant the sole occupier of the house. It appears from the condition of the house that she had dressed herself, and attended to her usual domestic duties, lighting the kitchen fire, putting the kettle on, &c. ; she had then seated herself at the kitchen fire. At 1.30 on the morning of the 26th, when I arrived, I found her sitting before the fire, with rigor mortis commencing (quite dead), the occiput resting on the armchair-back, and a large pool of blood beneath the chair. I could discover no trace of blood about the room, except under the chair. I found her to be far advanced in pregnancy, with a fœtus in utero. I arrived at a hasty conclusion that, as she was dead, it was probably a case of ante-partum hæmorrhage or otherwise, and that it was a case for the police to investigate.

Upon the coroner's order I made a post-mortem on the afternoon of the 27th. I very carefully examined the whole of the internal organs, and found them healthy, with the exception of the lungs, which indicated old pleuritic adhesions, and a white patch of pericardial inflammation on the heart ; the valves of the heart were healthy, and all the cavities empty. I then removed the whole of the vagina and uterus, including the rectum. Upon slitting open the uterus, I found it to be filled with the liquor amnii, and a healthy male child, with the placenta attached to the upper third of the left side, and the os most perfectly closed with the plug of cervical mucus. Upon examining the vagina, I found a lacerated and contused wound just rupturing the mucous membrane upon the left side, about an inch and a half from the orifice ; the wound was about an inch in length by a quarter in breadth. Around the circumference of the laceration the parts presented a bruised ecchymosed appearance, and contained dark extravasated blood. There was no hæmorrhage from the rectum. I may mention that the left hand of the woman presented marks of blood upon it. That she died of syncope there can be little doubt, looking at the cavities of the heart, small amount of rigor mortis, blanched appearance, and great loss of blood. But the question is, How did the wound arise? Was it self-inflicted or otherwise? Was it from a fall? If the latter, there were no external marks to corroborate it, and the case appears to me extraordinary, from so small an amount of laceration causing hæmorrhage and death. My friend, Mr. Durham, kindly examined the case with me, and coincided with me that the wound, from its appearance, had probably been made on the 24th, the first time the hæmorrhage occurred.

Had prompt medical aid been applied for, need the case have appeared upon the post-mortem table? This case has interested me very much, and I am sure will provide ample speculation as to causes, probabilities, &c., and has taught me at least one practical lesson, that in applying the forceps the vaginal walls may prove a source of trouble, and cannot be lacerated without risk of fatal termination.

Yours faithfully,

January, 1879. WILLIAM SOPER.

Alpha.—We cannot in any way recognise the practice of dentistry by persons who are not surgeons as surgery. A surgeon is *de facto* a practitioner of surgery as a whole, inclusive of dentistry. Surgeons are not required to register under the Dental Practitioners Act to practise as dentists, and we cannot conceive that they are prohibited from teaching what they may practise.

ROYAL COLLEGE OF SURGEONS OF ENGLAND : MEMBERSHIP EXAMINATIONS.

THE first professional examination for the diploma of Member of the College was commenced on Monday last, and, owing to the large number of candidates (140), the library was utilised for the purpose, in addition to the theatre, when the following questions were submitted to the candidates, who were required to answer at least four, including one of the first two, out of the six questions :—

1. Describe the ossification of a long bone in its entirety.
2. Give an account of the gases contained in the blood, and of the experiments by which their combination with its other elements is ascertained.
3. Describe the structure of the knee-joint, including the bones, cartilages, and synovial membrane, and explain its movements.
4. Describe precisely the muscular attachments on the os pubis, and name the nerves supplying each muscle.
5. Enumerate in their order the parts seen in a dissection from skin to bone of the front of the arm, from the level of the insertion of the deltoid to that of the pronator teres.
6. Give the position and relations of the submaxillary gland, trace its duct into the mouth, and state the nature and uses of its secretion.

Dr. Henry MacCormac.—We regret that the pressure on our space compels us to decline a paper on the interesting subject of the Painless Slaughter of Animals for Food. Everyone must sympathise with the purpose of the author, though some may demur to the plan he recommends.

THE INDIAN MEDICAL SERVICE.

THE following letters have been forwarded to us by Surgeon-General Edward Balfour, of the Indian Medical Service :—

To the Under-Secretary of State for India.

2, Oxford-square, Hyde-park, London, Dec. 11th, 1878.

SIR,—I beg to bring to your notice the prevalence of a report in Madras, "that the Indian Medical Service is to be closed for the next six years, the British Medical and the Navy being only open to competition ; the Indian appointments are to be mere civil surgeoncies, and are to be given to men who are thought competent for them."

There are at present in Great Britain several young men from India studying medicine, in some of whom I am interested, and one of them has written to me as above. I have yesterday, in reply, desired him to continue his studies ; but as rumours of this kind are very disquieting to individuals, and injure the public service by deterring men from undertaking the study of medicine, although I do not give credence to the report, it would be satisfactory to many in this country and in India if you could obligingly favour me with the state of the case.

Should the report alluded to be founded on authority, might I suggest that all the students from India now in this country be exempted from its operation.

Your obedient servant,
EDWARD BALFOUR, Surgeon-General.

No. 3225. Military. India Office, S.W., Dec. 19th, 1878.

SIR,—I am directed by the Secretary of State for India in Council to acknowledge the receipt of your letter of 11th December, and to acquaint you, in reply, that no information has been received at this Office from the Government of India such as that mentioned by you relative to the Indian Medical Service.

I have the honour to be, Sir,
Your obedient servant,
(Signed) ALLEN JOHNSON, Colonel,
Surgeon-General Balfour. Military Secretary.

Mr. John Jackson.—Three essays were sent in. The result, of course, cannot be known for several weeks.

Mr. Engledue Prideaux.—Yes.

"PROLONGED CONCUSSION FROM A FALL DURING PREGNANCY."

To the Editor of THE LANCET.

SIR,—The case, with the above heading, detailed at page 918 of THE LANCET of Dec. 28th, and the remarks following it, bring to my remembrance the following.

Some years ago I saw a circus-rider, who was at about the fifth month of her pregnancy. She was already mother of two or three children. Abortion was threatened, which in my innocence I imputed to her equestrian exercises. This she simply laughed at, and assured me that she rode up to the seventh month, while one of the troupe rode to within a fortnight of her confinement. In fact, the general idea seemed to be that they could ride until their increasing size prevented them from getting through a hoop. The threatened abortion mentioned was imputed to the hypercathartic action of some pills. Bathing-women in very many instances go into the water, and stay there more or less all day, during their catamenial period, and are none the worse for it. I shall not easily forget my horror at seeing a lady far advanced in pregnancy shoot down a flight of stairs feet foremost, bumping upon every one of the stairs, yet no ill-effects followed either to the mother or the child. Much must be allowed to heredity in the case of circus-riders and bathing-women, as these callings are particularly hereditary. But the moral of all this is that legislation on such a point should not be attempted. Proper precautions to prevent such accidents should be taken, and a similar (accidental, so called) case should be properly investigated, and the delinquent severely punished, not by fine, but by imprisonment. The accident described could never have arisen if the strap had not been weak. Parsimony or want of inspection alone caused it.

I am, Sir, yours faithfully,
Pitnacree, Jan. 1879. M.D., F.R.C.S.E.